



Reading Comprehension Performance, Self-efficacy Perceptions, and Causal
Attributions within a Collaborative Strategic Reading (CSR) Approach and an
Attributional Feedback Intervention

Thesis Submitted for the Degree of Doctor of Philosophy

Institute of Education

UNIVERSITY OF READING

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May, 2020

DECLARATION OF AUTHORSHIP

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

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ACKNOWLEDGMENT

All praises to Allah for the opportunity and the strength to accomplish this work.

My deepest thanks and gratitude to my main supervisor, Prof. Suzanne Graham for her continuous guidance throughout my study. I would also like to thank Dr. Anna Tsakalaki, my second supervisor who offered deep insights into the study.

I am deeply grateful to my examiners Dr. Naomi Flynn and Dr. Karen Forbes for their insightful and valuable feedback.

My thesis is dedicated to the memory of my mother who was my drive to successfully accomplish this work.

With many thanks to all the participants who were involved in my study.

My special thanks go to my family for their continuous support, guidance and encouragement.

ABSTRACT

The present study sought to examine the effect of instruction based on collaborative strategic reading (CSR) both with and without attributional feedback on Algerian university students' reading comprehension performance, self-efficacy perceptions, and causal attributions for success and failure. A total number of 104 second year English as a foreign language students (EFL) were invited to take part in the study and were divided into three groups. One group referred to as the CSR Plus group received the CSR instruction as well as the teacher's attributional feedback on their reading comprehension performance and strategy use. The CSR group received only training on the use of the CSR strategies, whereas, the Control group was not exposed to any training program.

Qualitative and quantitative research designs were adopted within the present quasi-experimental study. A pre-post-test design and an intervention was implemented over 10 weeks to provide answers for the research questions addressed. The research data in this thesis were drawn from six main sources: an English language placement test, a reading comprehension test, an English reading questionnaire, a semi-structured interview, learning logs, and an evaluation questionnaire about student' perceptions of the intervention.

Findings of the study revealed that the CSR and the attributional feedback interventions were effective in improving students' reading comprehension proficiency and sense of self-efficacy. In other words, the Intervention groups significantly outperformed the Control group in both reading comprehension and self-efficacy scores. However, at post-test the CSR and the CSR Plus did not differ significantly in their reading comprehension level, but in the self-efficacy perceptions they did, in that the CSR Plus had significantly higher levels.

With regards to the impact of the intervention on students' causal attributions for success and failure, analysis revealed that the only significant differences observed were at post-test between the Control and the CSR group on internal attributions for success, with higher levels for the Control group. Additionally, the Control group alone showed a change in attributions over time, becoming less likely to attribute success to external causes. Moreover, looking particularly at strategy use attribution, the overall analysis indicated that the CSR Plus group alone significantly increased their strategy attributions for both success and failure at post-test. That is, the attributional feedback intervention was successful in making the CSR Plus students link their success and failure to the internal, controllable, and changeable strategy use factor.

Regarding the impact of the intervention by proficiency levels on students' reading comprehension performance, results showed that for the low proficiency learners, the Intervention groups significantly outperformed the Control group, however the CSR and the CSR Plus did not differ significantly. No such difference was found between the high proficiency learners in the three groups. Moreover, for self-efficacy level, students' scores did not differ significantly by their proficiency level.

In terms of students' perceptions of the CSR and the attributional feedback intervention, the overall results revealed positive perceptions. In other words, students believed that the intervention was effective and helped them to improve their reading comprehension performance, self-efficacy perceptions, and attributions for success and failure. Accordingly, the outcomes from this research seek to provide EFL teachers in general and Algerian EFL teachers in particular with pedagogical implications for the teaching of reading comprehension to their students to help them achieve well

and feel more self-efficacious in dealing with reading comprehension , and in English language learning more generally.

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CHAPTER ONE. GENERAL INTRODUCTION

1.1 Introduction

The purpose of this chapter is to introduce issues related to the linguistic situation in Algeria, language policies and educational system reforms. The adoption of the License Master Doctorate (LMD) system as the recent and the current educational system in the Algerian universities is also discussed in this part of the thesis. The statement of the problem, and organization of the thesis are provided.

1.2 An Overview of the Linguistic Landscape in Algeria

After the country's independence in 1962, the co-existence of four spoken languages in Algeria - Algerian Arabic, Modern Standard Arabic, French, and Berber- all interacted to form the diverse linguistic scenery in the Algerian society. Algerian Arabic (AA) known also as *Derdja* (colloquial) and spoken/dialectical Arabic is a dialect that differs from one region to another alongside the country, and it is used in daily communication. AA is the native language of most Algerians, and it is spoken by more than 70% of the whole Algerian population, except for those who speak Berber (known also as Tamazight with its different varieties; Kabyle, Chaouia, and Chenoua, which is only used by approximately 20%) (Chemami, 2011; Droua-Hamdani et al., 2013).

Modern Standard Arabic (MSA), also called Koranic, or classical Arabic, has constituted the national language of Algerians since their independence. It is perceived as a prestigious language in the country as it is associated with the language of the Quran, and it is the 'educated spoken Arabic' used in formal settings such as media, political speeches, religious and educational matters

(Hamzaoui, 2017). Another language spoken by Algerians is French which is widely used fluently by most Algerians. French as the language of the colonizer was the most dominant language during the colonization era as it was used in everyday life situations and taught in schools as well (Benrabah, 2007).

This multilingual situation in Algeria has been a controversial and a much-disputed subject among policy makers regarding the question of which language should be used as a medium of instruction in schools. According to Benrabah (2007), there have been discussions since the year 2000 about the status of language teaching in primary, secondary, and higher education; one issue is whether to keep the context monolingual (just Arabic as the national language) or to introduce more languages (to make the context bilingual Arabic-French). The section below provides a detailed description of the status of language education policies and reforms in the Algerian schools.

1.3 Language Education Policies and Educational Reforms in Algeria

There have been a number of phases in the history of language policies in Algeria, which then resulted in affecting the different policies in education as summarized by Benrabah (2007) as follows:

1. In 1962: The educational system was totally in French which was imposed and taught as first language because of the French colonization which monopolized the country during this period (Benrabah, 2007).

2. Late 1960s: A key aspect of this phase was the nationalist transition which emphasized a monolingual educational system by imposing Arabic as a main language in the educational sphere. That is, for the educational sphere, post-colonial leaders adopted a policy called ‘Arabicisation ’or

‘Arabization’ which brought about many changes to education. The teaching of Arabic or ‘Arabization’ was emphasized at the primary, secondary, and higher education school levels during this period, and it was the only medium of instruction by the year 1990 (Bennoune, 2000 cited in Benrabah, 2007).

Within the Arabization system, the Algerian policy makers attempted to shape the identity of the country including the religion of Islam and the Arabic language. They tried to eradicate the French culture and identity after their independence. One way of doing this was to remove French as a language of instruction from schools and substitute it with Arabic, their official language, to be used as the first language in education and public administration (Chemami, 2011). Arabisation emphasizes the use of standard Arabic as the only medium of instruction in schools and declares it as the country’s first and official language to be used in media, political and religious speeches (Miliani, 2012). Another aspect of this policy was the implementation of traditional language teaching methods which followed the behaviourist steps in teaching the language through repetition and memorization (Benrabah, 2004).

Arabization policy in the Algerian schools was doomed to failure for many reasons. Initially, Algeria is a multilingual context in which there are linguistic varieties including not only Arabs but also Berbers whose native language is not Arabic but Amazigh (Benrabah, 2004). Another problem with this policy in the educational sphere is that Algerian teachers were not ready for such innovation in Arabic as they were ‘Francophones’ who had been taught the language of the colonizer during the colonial period (Hamzaoui, 2017). Furthermore, the scarcity of Arabic written reading materials was also another issue which led to the decline of the Arabization policy in the educational system (Djennane, 2016).

3. The fundamental schooling system: It was first introduced to the field of education in 1976. It was based on the view that learners should be exposed to six years in the primary schools and three in the middle school and aimed to emphasize the re-implementation of French in scientific streams such as maths and biology (Rezig, 2011). French was emphasized as a first mandatory foreign language in grade four in primary school, whereas, English was imposed in grade eight as a second mandatory foreign language (Benrabah, 2007).

4. English in the primary school: Since 1993, the policy makers attempted to enhance the quality of foreign languages in the country, by introducing their teaching to children at early ages. English was in competition with French and children at primary schools were required to choose which foreign language would be their first mandatory foreign language in the fourth grade of the primary education cycle (Benrabah, 2004).

5. Early 2000s: Algeria reacted towards the 'free market economy', globalization and world internationalism with less imposition of Arabic (Benrabah, 2007). After severe criticism of the Arabization policy in the country, mainly in education, there was an urgent call for other educational reforms. According to Chemami (2011), there were educational policy reforms after 2000, which aimed to reconsider the whole educational system and improve the socio-economic status of teachers by creating the national commission for the reform of education system in 2000.

In 2000, the national commission for the reform of educational system tried to solve the educational system by setting up new reforms in 2001 which called for the modernization of education. Bellalem (2014) mentioned that many changes suggested by the commission have been applied to the educational system in three platforms as follows:

1. The first platform suggested changes to the school system by introducing a pre-school level at age 5, reducing the primary school education from six to five years only, and middle school education from three to four years.
2. Improving the quality of teaching by providing training to both teachers and inspectors.
3. Introducing new programs for all levels and providing new teaching materials and methods through Information and Communication Technologies (ICTs) in education.

Bader and Hamada (2015) also claimed that the national commission for educational reforms attempted to cope with the technological and globalized world, through reconsidering the current educational system and making further recommendation to make it better. One of those reforms was the inception of new teaching methodologies, namely, the competency-based approach (hereafter CBA). In 2004, there was a shift from communicative language teaching (CLT) to CBA in language teaching, as opposed to the direct and indirect teaching methods in the 1970s, and CLT and objective oriented pedagogy in the 1980s (Bouhadiba, 2015).

In English language teaching, the CBA system was introduced in 2005 with the hope of helping learners to achieve competence and develop problem solving abilities in different learning situations (Djebbari, 2013). This innovative system brought new changes in the content of the textbooks, provided teachers with instruction on how to perform their roles, emphasizing learner centeredness and collaborative work activities (Djebbari, 2013).

There was growing support for the claim that changes implanted into the educational system were unsuccessful. For example, Bouhadiba (2015) argued that in the implementation of the CBA there was still a gap between theory and practice, because learners and their teachers were not

prepared for the sudden change, so that they continued using the old methods in teaching. That is, although the CBA calls for a learner centred approach and puts the learner at the heart of the teaching process, Algerian classrooms are still teacher-centred, that is, most of the work is controlled and done by teachers.

Mami (2013) also lends support to the claim that CBA was a failure in Algerian classrooms. For her, the lack of teacher experience in dealing with the new innovative approach, the high number of students in classrooms, and the level of language proficiency among both teachers and learners all interacted to inhibit the successful implementation of the new approach.

Besides changes to the teaching methodologies and to the length of study in both the primary and middle education phase, other innovations to the educational system included making schools more bilingual, by re-establishing French as a first mandatory foreign language (Benrabah, 2007). As opposed to the case of the educational system in 1970s when French was taught in the fourth grade of the primary cycle, it is now taught starting from the second grade. All scientific streams in secondary schools are taught in French instead of Arabic (Benrabah, 2007).

Overall, despite the efforts spent in making changes to education in the Algerian schools, language policies have been dominated again by many inconclusive debates. The Arabo-Islamists were in favour of the monolingual system, whereas, their Francophone counterparts were modernists who called for a bilingual schooling system (Benrabah, 2005). The major problem with whether to keep the monolingual system, or to introduce a bilingual system was that the sole emphasis on a monolingual educational system negatively affected the linguistic competences among the Algerian population (Benrabah, 2005).

1.4 Higher Educational System Reforms in Algeria

There were many struggles in establishing an educational system in Algeria since 1962, and this created an arena of debates. The use of French started to decrease giving an opportunity to English as second foreign language. To catch up with the demands of globalization and keep pace with the world's development, Algerian policy makers tried to instil changes to the educational system by adopting the LMD system, with a tremendous hope to resolve the educational system, and increase the quality of teaching at universities (Idri, 2005; Khelifa et al., 2013).

1.4.1 The Adoption of the LMD System to Algerian Universities

The Bologna system, which was first launched in European countries in 1999, embodied agreement on launching one similar program for higher education in all European universities. This program is called the 'credit transfer accumulation system', known also as LMD in some French-speaking countries (France, Algeria, Tunisia, and Morocco) (Daghbouche, 2011). This system gives more opportunities to students to undertake higher studies such as masters and doctorate (Rabhi, 2013).

In the year 2004-2005, Algeria agreed to join the principles of the Bologna process in adopting the LMD system which stresses 'learners' output and mobility', improving the quality of learning, and bringing changes to language teaching methods such as the CBA (Mami, 2013). By adopting the LMD system in Algerian universities, educational language program developers through the implementation of the CBA approach, attempted to focus on a more learner centred approach which gives opportunities to the learner to take part in the learning process, and hence create more autonomous learners. However, Algerian universities failed to achieve learners' autonomy for many reasons.

As opposed to the old system called ‘the classical system’ in the Algerian universities, the length and the organization of studies have been changed within the new LMD program. For example, instead of a four-year program in the classical system, it is now a three-year program of study in the LMD to obtain a Bachelor degree. A Master’s degree can be awarded after completing a two-year program of study, and a doctorate is research-based program conducted within three to four years.

The new innovations of the LMD system were doomed to be a failure, as they were hardly implemented by EFL teachers in the Algerian universities because of the constraints they come across. A number of researchers have reported the main reasons for the failure of the LMD system in the Algerian universities. As an illustration, Rezig (2011) argues that teachers’ low linguistic competence in foreign languages as a result of the Arabization policy is one major problem which made them unprepared to handle the new educational reforms. In a similar way to Rezig (2011), Azzi (2012) proposes that despite the merits of the LMD to the organization and the architecture of higher educational system (such as adopting a learner centred approach and ongoing assessment), teachers’ negative attitudes towards this system inhibited its effective implementation.

1.5 The Status of English Language Teaching in Algeria

Algerian political and educational authorities tried to integrate English as the international language of science and technology, which is widely spoken by people of different nations, in the educational system (Slimani, 2016). In 2003, English was introduced as a second foreign language from the first to the fourth year, and the first to the third year in the middle school and the secondary school education respectively, instead of only two years of instruction in the middle school before 2003 (Miliani, 2012). Nowadays in the Algerian schools, English is taught starting

from the first grade in the middle school, as opposed to French which is taught in the second grade of the primary school, however, the matter is different in universities in which more than 95% of scientific and medical disciplines are exclusively taught in French (Miliani, 2012).

With regard to the teaching of English in departments of English in the Algerian universities, the focus is on the teaching of the four language skills, (except for reading which is not taught in all universities). Students deal with modules such as oral expression which includes both listening and speaking, and a written expression module which tackles the teaching of principles and features of academic writing. The teaching of grammar, phonetics, literature, British and American civilization, research methodology, psychology, and foreign languages - either Arabic, French, or German - are also emphasized.

In the context of the present study, the English department in which the research took place is also working under the LMD system which was introduced only in the year 2010. Like other English departments in the country, English language teaching within this department is based on the teaching of modules such as oral expression, written expression, phonetics, grammar, literature, civilization, and research methodology. One noticeable thing is that reading comprehension as a module is neglected and has never been integrated in the curriculum in this university unlike other language skills (writing and speaking) which are emphasized. Thereby, this indicates a need to understand the status of reading comprehension abilities that exist among students within this department, and the possible ways of improving them.

1.6 Statement of the Problem

Despite the innovations and the reforms such as the LMD system and the CBA that have been adopted in the higher educational system in Algerian universities, the system is still considered to be a failure. Language program developers have therefore tried to introduce a more learner-centred approach that would create more autonomous learners. However, Algerian universities failed to achieve learners' autonomy. Hadi (2017) suggested that learners at secondary school level become accustomed to being spoon-fed by the teacher who dominates the teaching learning process, which hence affects their motivation to learn independently from their teachers. Students within a teaching environment which is controlled by the teacher are probably less interested to participate in learning activities because of the fewer opportunities they have. Learners may feel that the teacher is the authority in the classroom, and the only individual who should take part in the teaching and learning process, which then may negatively affect their readiness, motivation and autonomy in undertaking learning activities (Chang et al., 2017).

Looking particularly at reading comprehension as one of the language skills which has been studied widely in the literature, the available account of research within the Algerian context (Baiche, 2015; Benettayeb-Ouahani, 2015; Bouazid & Le Roux, 2014) shows that Algerian university students' level of reading comprehension proficiency is low. As an illustration, in Bouazid and Le Roux's (2014) study, in addition to the teaching methodologies followed by the teachers in the classroom, students' low levels of self-efficacy perceptions as an internal factor was identified as a major contributing cause for the unsatisfactory level in reading comprehension proficiency as reported by students in the semi-structured interview. Bouazid and Le Roux (2014) indicated that teachers in the classrooms do not provide any training for students on how to use the reading strategies necessary for accomplishing reading comprehension activities. That is, the

teaching of reading comprehension in the classroom is still teacher-centred, in which the teacher dominates the process, with too little opportunities for students' engagement.

Benettayeb-Ouahlani (2015) also supported the claim that Algerian university students are not competent and independent readers. She, mainly, links this reading incompetence to the lack of an appropriate methodology of teaching reading in the Algerian classrooms, because the teacher still has control over what and how learners are required to read. She also offers that teachers' focus is much more on language development (grammar and syntax), and not on developing students' passion for reading or increasing their ability in knowing how to read different materials. The lack of practising reading among learners causes them difficulties in understanding the grammatical structures, and the range of vocabulary they encounter and hence their overall reading comprehension proficiency (Baiche, 2015).

Overall, in view of all that has been mentioned so far, one may suppose that an approach necessary for enhancing students' opportunities to take responsibility for their own learning (learner-centred approach to enhance learner autonomy) is needed. As a result of learning autonomy, learners' self-beliefs about their abilities to deal with certain language tasks may increase, and hence, their motivation to learn as well as their language learning ability (Mojoudi & Tabatabaei, 2014). Arguably, a reading comprehension approach which emphasizes learning autonomy known as collaborative strategic reading (CSR henceforth), may work best within the Algerian EFL context. This learner-centred approach has been implemented in the EFL classroom and is claimed to have an impact in improving students' reading comprehension abilities (Klinger & Vaughn, 2000), and self-efficacy (Kassem, 2013).

In addition, a number of researchers have also emphasised the importance of modelling (receiving guidance from others) in enhancing learners' motivation and academic achievements. A good example can be found in Schunk (2003), and Schunk et al. (2014) who point out that modelling in the classroom through teachers' feedback or collaboration with their peers plays a vital role in enhancing learners' motivation to learn, their self-efficacy in undertaking the tasks, and hence their academic achievements. Once learners receive guidance through cooperative work with more competent learners in the classroom, or through teacher's feedback, their understanding of the tasks may increase, and their learning may become more effective.

Schunk et al. (2014) stress the importance of 'modelling' in increasing learners' beliefs in their own abilities, in the sense that learners are likely to change what they believe about their skills when interacting with their peers or receiving guidance and feedback from their teacher. Consequently, teachers' feedback and collaborative work are claimed to be effective interventions altering students' attributions for their successful or unsuccessful achievements, and thus affecting their motivation, self-efficacy beliefs, and accomplishments (Koh, 2008; Mercer et al., 2012).

Therefore, given the above problems the Algerian students face in reading comprehension, this study aimed to obtain data which would help to develop an understanding of:

1. The extent to which the CSR and attributional feedback intervention may influence Algerian EFL students' reading comprehension ability and levels of self-efficacy.
2. Whether the intervention helps students to change their causal attributions for success and failure in reading comprehension.
3. Students' perceptions of the CSR and attributional feedback.

1.7 Overview of the Thesis

My thesis is composed of seven chapters. The first chapter is the general introduction which gives an overview of the linguistic landscape in Algeria, the language education policies and the system reforms, as well as the status of English language teaching in Algerian schools. The adoption of the LMD system as the actual educational system in the Algerian universities is discussed in this part of the thesis. The statement of the research problem is also provided in the introduction chapter.

Chapter two begins by laying out the theoretical dimensions of the research which is divided into different sections. The first section of the literature review deals with reading comprehension models, theoretical perspectives on the difference between first language reading (L1) and reading in second language (L2). Language learning strategies, models of strategy instruction, and multiple reading strategies instruction are reviewed in the second part of the chapter. The third section discusses the concept of CSR; its theoretical framework, teaching principles and procedures, and previous studies. The next section is an overview of the self-efficacy and attributional feedback concepts.

The third chapter is concerned with the methodology used for this study. The research design, context, description of the participants and sampling are first outlined. The next sections of the chapter describe the data collection procedures and instruments used at pre-test and post-test phase, as well as during the intervention sessions. Analysis of pilot study findings, issues of validity and reliability, ethical consideration, and data analysis methods are identified in the last sections of the chapter.

Chapter four and five respectively analyse the quantitative and qualitative findings of the research gathered from the language tests, the questionnaires, the interview, and the learning logs. The fifth chapter includes a discussion of the quantitative and qualitative findings presented in chapter 4 and 5, with reference to previous studies outlined in the literature review. Finally, a summary of the main findings, limitations, suggestions for further research, implications, and contribution of the findings are discussed in the conclusion chapter of the thesis.

CHAPTER TWO. LITERATURE REVIEW

2.1 Introduction

This chapter presents the relevant review of the literature for the present study. The first section gives an overview of the concept of reading comprehension, reading comprehension models, as well as the relationship between first language reading and second language reading. It goes then to discuss language learning strategies, models of strategy instruction, and multiple strategy instruction. The next section discusses the CSR approach, its theoretical framework, implementation procedures, and empirical studies. The self-efficacy construct with attributional feedback is presented in the subsequent sections of this chapter. The research gap, the research questions, as well as the summary of the chapter are provided respectively in the last three sections of the chapter.

2.2 Reading Comprehension

Throughout the literature, defining reading comprehension has been difficult for researchers, because of the many processes involved within it. Randi et al. (2005) suggest that one way to look at the reading comprehension construct is to identify the different cognitive processes and strategies such as decoding, interpreting and summarizing readers use to achieve comprehension. In a similar way, Weir and Khalifa (2008) offered that to understand the process of reading comprehension, it is better to know the different reading models used to understand written materials. These different ways of explaining the processing of written material are referred to as 'reading models'. Bottom-up, top-down, and interactive reading are three ways of processing reading, which then may help to understand the nature of the reading comprehension process (Aebersold & Field, 1997; Eskey, 1988; Grabe 2009; Grabe & Stoller, 2002).

2.2.1 Reading Comprehension Models

Within the bottom-up framework, reading is viewed as a process of decoding the text by recognizing every single letter, word, and sentence (Grabe, 2009). That is, readers process the text from lower to higher levels, by processing each word letter by letter and each passage sentence by sentence to decipher the whole meaning of the ongoing text. Grabe and Stoller (2002) referred to ‘basic word recognition’ which is a lower-level process as one aspect of the bottom-up model. For them, word recognition emphasizes the importance of orthography and word units within language input for reading comprehension, and they consider that recognizing the meaning of individual language units is the key for effective reading comprehension.

Syntactic parsing is another important aspect of the bottom-up framework of reading comprehension (Grabe, 2009). The reader brings together words stored in the mind to understand the grammatical structures such as the nature of words (verbs or nouns), which then seems to be helpful in understanding the meaning of clauses that occur in the text (Grabe & Stoller, 2002). This process of meaning construction of the passage from the lowest to the highest level becomes automatic so that learners recognize the lexical items without being aware of how this process occurs (Aebersold & Field, 1997).

Overall, the bottom-up model of reading emphasizes that reading is a process of automatically decoding the printed material through a hierarchal order, starting from the lowest components (letters and words) to the highest levels including sentences, paragraphs and texts to decipher the meaning of the graphic knowledge. However, this reading model perceives reading as only recognizing individual linguistic items to understand the meaning, which made it subject to criticism. Goodman (1976) claims that the bottom up model for reading oversimplifies the reading

comprehension process by viewing it as just decoding letters, words and sentences without putting into consideration the context of the text, and the background knowledge of the reader. The importance of the latter is emphasized within another reading model known as the top-down model of reading.

In the top-down model of reading, readers' previous knowledge and expectations about the reading material interact to primarily affect their comprehension of the written text (Aebersold & Field, 1997; Grabe, 2009; Grabe & Stoller, 2002). That is, before initiating the reading of a text, readers come with a set of expectations about what information would appear in the material, and then try to confirm or reject the set of generated expectations based on their cultural background knowledge. The importance of background knowledge in reading comprehension has been also emphasized by Goodman (1967) cited in Goodman (1976) who referred to reading as 'a psycholinguistic guessing game', which highlights the importance of background knowledge and context information in making hypotheses and confirming information from the text. In order to comprehend a text, readers within the top-down model try first to activate their previous knowledge about the topic, which is helpful in predicting what they believe would appear in the text (from the higher processing level). The readers then use syntactic and semantic clues which may help them to confirm or disconfirm their predictions about the text (the lower processing level).

Grabe (2009) reacted to this top down model by claiming that the process of guessing and predicting the meaning does not represent the quality of a good reading ability, as good readers are not always good guessers. He suggested that good readers do not always focus on the context to predict the meaning of new vocabulary they encounter, compared to poor readers who benefit more from the context. Another criticism for this model came from Koda (2005) who claimed that the reading comprehension process is not the same in the reader's first language and second language

which makes the possibility of transferring reading abilities from one language to another a difficult task to achieve. Less proficient readers may have the difficulty of automatic recognition of the meaning of the lexical items within a text, and this difficulty would not be overcome with the process of guessing only (Alderson, 2000). Additionally, poor lower level processing does not leave enough 'processing space' for higher order processes to function effectively.

Consequently, in the attempt to have a clear idea about the nature and the meaning of the reading comprehension process, researchers disagree about the relative role and importance of bottom-up or top-down processes. To clear this discrepancy, another reading model which emphasises neither bottom-up nor top-down appears to give a more adequate characterization of the reading comprehension process. This is known as the 'interactive reading model' (Eskey, 1988; Grabe, 2009; Grabe & Stoller, 2002). This model (first suggested by Rumelhart, 1985) posits a coordination of both bottom-up and top-down models and perceives the reading comprehension process as parallel rather than linear, entailing a combination of linguistic and context knowledge to construct meaning from the text (Rumelhart, 1985). That is, in an efficient reading comprehension process, there should be a combination between the recognition of the meaning of individual words, and previous knowledge about the content to be able to make inferences and predictions of what comes next in the text. This includes also comprehension monitoring, as well as checking for internal and external consistency in the text.

Stanovich (1980) on the other hand developed 'the interactive- compensatory model' to explain how readers overcome deficiencies they may come across, and which may also influence their comprehension of the text. In his model, Stanovich proposed that once readers lack enough background knowledge about the topic, they might use other processes such as the recognition of single words' meanings, extracting meaning from grammatical and syntactic features of phrases and

clauses to be able to read for general ideas and make sufficient inferences. Similarly, if readers lack lower-level knowledge, they draw on background knowledge to understand the reading material.

Readers' background knowledge is also emphasized within 'the schema theoretic view' of reading. The schema or background knowledge concept was first proposed by the British psychologist Bartlett (1972) when he tried to conduct studies on the ability of participants to recall native American folktales. He found, in some cases, that participants did not remember words or expressions accurately, so they replaced the unfamiliar words they encountered by something known to them and made inferences that went beyond what was mentioned in the original text. Bartlett then proposed that people have schemata by which old knowledge influences new information. Schema theory was introduced by Anderson (1977) to the educational field in order to explain how the reading comprehension process works. He assumed that schemata or the background knowledge stored in memory work as filters to the new information received by linking the incoming information with what readers already have in their minds. Alderson (2000) defined schemata as, "A network of information stored in the brain which acts as filters for incoming information" (p. 17). Whereas, Carrell and Eisterhold (1983) divided schemata into two types: content and formal schemata. They stated that, "Content schemata are the background knowledge of the content area of a text" (p. 560). This means that better comprehension of the text relies on readers' familiarity with its topic. As opposed to the content schema, formal schemata are the, "Formal, rhetoric or organizational structures of different types of texts" (Carrell & Eisterhold, 1983, p. 560). Having discussed how reading comprehension might be conceptualised, an important next step is to explore if this process is similar across learners' first and second language.

2.2.2 The Relationship between Reading in the First Language (L1) and Reading in the Second Language (L2)

In the process of reading comprehension in L2, the reader makes use of a set of cognitive abilities to be able to construct meaning from the ongoing passage. The process requires L2 readers to make use of both L1 and L2 since there exists a difference between the two languages (in terms of grammar, lexis, syntax, phonology, morphology) (Alderson, 1984; Jeon & Yamashita, 2014; Koda, 2007). Koda (2007) claims the effectiveness of the integrated use of both L1 and L2 to reading in the L2. He stated that L2, "Unlike first language (L1) reading, it involves two languages. The dual involvement implies continual interactions between the two languages" (Koda, 2007, p. 1) This argues the use of learners' L1 as a source to understand L2 while reading a text that is not in their L1, and hence entails the compromise use of both readers' L1 and L2 for successful reading comprehension.

A much-debated question is whether L2 reading is related to L1 reading or they differ from each other. Researchers such as Grabe (2009), and Koda (2007) believe that there are many aspects that make reading in both L1 and L2 linked to each other and differ from each other as well. Throughout the literature, two main hypotheses were formulated with regards to the L1 and L2 reading relationship. First, Cummins (1979) suggested 'the developmental interdependence hypothesis' concerning the nature of the L1 and L2 reading relationship. He assumed that reading in L1 is similar to reading in L2 arguing, "The development of competence in a second language (L2) is partially a function of the type of competence already developed in L1" (p. 222). That is to say, learners who are skilled in their native language are more likely to be proficient readers in L2 than those who are poor in their first language. Nevertheless, this developmental interdependence hypothesis received criticism by Verhoeven (1994) who contended that Cummins neglected the role

contextual factors and language abilities may have on the development of reading competence in both L1 and L2.

A conflicting hypothesis to Cummins' developmental interdependence hypothesis is 'the linguistic threshold hypothesis' by Alderson (1984) who questioned whether L2 reading is a reading problem or a language problem, and why readers who are proficient in their L1 have difficulties reading in an L2. He concluded that L2 readers have to reach a linguistic threshold (enough knowledge of L2 vocabulary and structure). This linguistic threshold is necessary for L2 readers to transfer L1 reading abilities efficiently to the L2 setting. However, there is no certainty about the amount of linguistic proficiency that readers have to possess to allow them to make use of their L1 effectively in their L2 text understanding, since the threshold depends on the task and the reader together (task complexity, the structure of the text, and the reader's proficiency) (Alderson, 2000; Grabe & Stoller, 2002).

Yamashita (2002) provided evidence that supports the linguistic threshold effect for L2 reading comprehension growth. In her study, 241 Japanese students were chosen as a sample to investigate the extent to which their L1 reading skill and L2 proficiency contribute to L2 reading comprehension performance. Analysis using multiple regression showed that L2 proficiency had the strongest effect for L2 reading ability and that both L1 and L2 predicted students' L2 reading growth. Findings of this study are in line with the linguistic threshold hypothesis in the sense that in L2 contexts, there is a possibility for learners to benefit from their L1 reading abilities, and that proficiency in L2 is a prerequisite for abilities in L1 reading to be transferred to situations in L2. Once learners develop a certain level of L2 knowledge, they hence might easily transfer their L1 reading abilities to help them understand and facilitate the process of reading in L2. However, learners with low L2 proficiency seem to struggle with transferring abilities in their L1 to reading

situations in L2. Therefore, readers who read in the L2 for example need to acquire basic L2 linguistic knowledge to help them read successfully in it.

Similarly, Yau's (2009) study provided confirmatory evidence that reading in L1 and L2 is similar. He examined the reading strategies used by 144 Taiwanese adolescents in L1 (Chinese) and L2 (English) using both quantitative and qualitative instruments. The former included the use of reading comprehension tests and two questionnaires for reading in Chinese, and the other for reading in English about the use of cognitive, metacognitive, and support reading strategies. The qualitative tools included semi-structured interviews, think-aloud protocols, and field notes. The results revealed that the participants used three types of strategies (cognitive, metacognitive, and support strategies) to read passages written in both Chinese and English. There was also a significant correlation between strategy use in both L1 and L2 reading with a large effect size ($r=.73$). Data gathered indicated that participants used the three strategy types (cognitive, metacognitive, and support strategies) to read passages written in both Chinese and English.

On the contrary, different from Yau (2009), and Rahimi et al. (2009) confirmed that strategies used to comprehend a text differed in L1 and L2. Through their research, they tried to compare reading strategies employed by 97 undergraduate Iranian EFL university students whose native language is Persian using a questionnaire and Persian cloze test. Findings showed that there was a difference in strategies applied by learners in their L1 and L2. In L1 reading, the participants' focus was on the use of semantic strategies (to get the meaning) as opposed to L2 in which they were more text bound and paid more attention to syntactic strategies (grammar) for the reason that they lacked proficiency in L2.

Overall, based on the different views of L1-L2 relationships, it has been argued that, "L2 reading research needs to develop a clearer understanding of how reading in the L1 and the L2 interact in L2 reading comprehension" (Brevik et al., 2016, p. 164). That is, because the view about how both L1 and L2 reading abilities, strategies, and linguistic features may interact to influence the reading process seem to be inconclusive, more research is needed. One possible explanation for differences in learners' L2 achievements might be that learners may not be aware of the different methods and strategies or what is known as learning strategies used when accomplishing language activities in the L2. A full discussion of the different language learning strategies is presented in the next section.

2. 3 Language Learning Strategies

The idea of language learning strategies came into being when teachers and researchers in a second /foreign language noticed that, although all learners receive instruction by the same teachers and under the same circumstances (the same language level in the same learning environment), some of them show better proficiency and success in language learning more than others (He et al., 2014). Researchers such as Macaro (2001), O'Malley and Chamot (1990), and Wenden and Rubin (1987) suggest that successful learners make use of some specific and effective methods and strategies to which their success may be attributed. These strategies have caught the attention of many researchers from the 1970s who have tried to define them in different ways from different perspectives (Tezcan & Deneme, 2016).

The birth of research in language learning strategies was related first with Rubin's work exploring 'what the good language learner can teach us' in 1975 in which she investigated the strategies that good learners employ to deal with different tasks in learning. Rubin (1975) found that

learners use what she called direct strategies such as guessing the meaning from the text, making inferences, monitoring, reasoning, and memorization in addition to other so-called indirect strategies (communication through production tasks, and opportunities for practising learning) (Cohen & Macaro, 2007).

When it comes to defining the term ‘language learning strategies’, Cohen’s (1990) definition for instance emphasized the notion of choice and consciousness of the learner, which are considered to be an important element for effective learning. According to him learning strategies are:

Learning processes which are consciously selected by the learner. The element of choice is important here because this is what gives a strategy its special character. These are also moves which the learner is at least partially aware of, even if full attention is not being given to them. (Cohen, 1990, p. 5)

In addition to this, Griffiths (2013) followed the same path as Cohen (1990) in defining learning strategies by focusing on the elements of choice and consciousness, but added to them some other characteristics (the active nature of the strategies, they are goal orientated, helpful in regulation of learning, and learning focused). However, Macaro (2006) suggests that it is better to describe learning strategies rather than to define them, by linking them to situations where they are used, the goals of each task, and the mental processes or actions used when accomplishing the tasks. In setting a goal in mind for their learning, learners would be able to manage the types and the number of strategies to be used to maintain that goal.

An important classification by O’Malley and Chamot (1990) categorized learning strategies into cognitive, metacognitive, and social or affective strategies:

1. Cognitive strategies: these strategies are used to directly influence the input and manipulate the tasks in ways that facilitate and increase the process of learning. They include inferencing, summarizing, organization, and elaboration of information (assimilation of new information into what learners already know).
2. Metacognitive strategies: are those strategies used to pay attention to particular language tasks' items, monitor, plan, and evaluate learners' own learning process.
3. Social/affective strategies: strategies used to facilitate own learning, to have control over the affective factors (feelings) such as cooperative learning with peers, asking questions to clarify things that learners may come across while learning, and self-talk that may enhance the feeling of own success in particular language tasks.

Turning now to the reading comprehension process as the focus of the present research project, reading comprehension strategies have been divided into various types by different researchers, overlapping with categories used in relation to general learning strategies. To illustrate, Block (1986) classified reading comprehension strategies into general / global, and local learning strategies. Global or general reading strategies are necessary for both monitoring and comprehending the reading comprehension process. These include top-down strategies such as getting the main idea of the passage, making inferences and drawing conclusions from the text, using background knowledge to understand a text, and evaluation of their understanding of the text (Block, 1986). Whereas, local strategies include paraphrasing, re-reading, solving vocabulary problems through the use of context and synonyms for example. These strategies are decoding strategies that are necessary to “understand specific linguistic units” (Block, 1986, p. 473).

In referring to the various definitions of learning strategies suggested by different researchers, there is still something common between them. One point that links them all together is that these strategies are used to facilitate the learning process for learners and make them aware of the different stages involved in the process. As Chamot (2005) said, “Learning strategies are procedures that facilitate a learning task. Strategies are most often conscious and goal-driven, especially in the beginning stages of tackling an unfamiliar language task” (p. 112).

From the foregoing discussions, it can be concluded that there is no consensus definition of learning strategies. However, most reading researchers agree on the importance of the conscious use of these strategies, having metacognitive control over using them according to their goals and task types (when, where, and how to use them), and a combined application of the strategies in one reading comprehension task (Grabe, 2009; Macaro & Erler, 2008). The characteristics mentioned above (consciousness, awareness, and the coordinated utilization of multiple reading strategies) all together account for the characteristics of effective, successful, and hence more strategic readers, as subsequent sections will explain.

2.3.1 Strategic Reading

According to D.L. Brown and Briggs (1989), it is the methods used to interact with the written text that may differentiate a strategic reader from a less – skilled reader. The former refers to individuals who set goals for their reading and are selective in the use of strategies that help in the understanding of the text. Once readers’ awareness about reading strategies increases, they can monitor what is happening during reading, and then become conscious of how to improve their reading comprehension (Akkakoson, 2013). Therefore, strategic readers can be defined as readers who have control over the use of a number of reading comprehension strategies and are conscious

about the use of a variety of strategies in maintaining their reading goals. However, there are important questions about what types of strategies readers may use to fulfil their reading goals, the maximum number of strategies, and the way learners should be taught to be strategic readers.

First, one important aspect of strategic reading is metacognition which is described by Papeontiou-louca (2003) as, "All processes about cognition, such as sensing something about one's own thinking, thinking about one's thinking and responding to one's own thinking by monitoring and regulating it" (p. 12). Schraw and Moshman (1995) suggested that the two aspects of metacognition, which are 'knowledge of cognition' and 'regulation of cognition' may play a crucial role in influencing individuals' learning.

With regards to learners' knowledge about the different factors that may affect their learning, it falls into three categories (Loew, 1984; Schraw & Moshman, 1995):

1. Declarative knowledge (know what): this implies that readers should have general knowledge about themselves as learners, and what factors might influence their performance such as the structure, the length, the purposes, and the use of different strategies that different reading comprehension tasks require.
2. Procedural knowledge (know how): this involves being able to apply reading strategies. Readers should be able to understand the key ideas of a reading passage and distinguish the unnecessary details from the main points in a text for example.
3. Conditional knowledge (know when and why): this involves developing knowledge about why reading strategies are important and knowledge of when to use them to fit with the different reading situations.

According to Schraw and Moshman (1995), the above forms of knowledge are part of learners' 'regulation of cognition' and includes planning, monitoring, and evaluation. First, planning refers to the learners' ability to select particular learning strategies which may have an impact on their performance (Schraw & Moshman, 1995). For instance, in the reading process and before reading, readers may look at the passage's headings and pictures to generate their background knowledge about the topic. Second, monitoring is the process of developing awareness of own performance (Schraw & Moshman, 1995). That is, learners can adjust the strategies they use to particular situations they are engaged in. Finally, evaluation refers to the process of evaluating one's performance by evaluating metacognitive knowledge and regulatory skills (Schraw & Moshman, 1995).

Moreover, strategic readers have the ability to control and monitor their learning using metacognitive abilities, and hence become more self-regulated learners (Zimmerman, 2002). Self-regulated learners also tend to have positive attitudes toward learning, and hence enough motivation to initiate the process, are aware of how to adapt and accommodate different reading strategies to a particular reading situation (Droop et al., 2016). Strategic readers are aware of the different structures of the language that might be helpful to understand the meaning of ambiguous words, the context in which words are used in the text. This leads to a better understanding of the text through metalinguistic awareness which supports the use and the control over reading strategies. Therefore, students need to practise the strategies to be able to master them and use them effectively through strategy instruction (Macro & Erler, 2008), and hence to transfer declarative knowledge about language learning strategies to procedural knowledge (O'Malley & Chamot, 1990).

2.3.2 Strategy Instruction

Providing teaching on the use of language learning strategies to the learners has been valued in the literature (Wanzek et al., 2010). It has been argued that strategy instruction enables learners to organize and integrate the acquired knowledge about the strategies to fit with the different learning situations they come across, and hence to improve their language skills such as listening and reading comprehension (Macaro et al., 2015; O'Malley & Chamot, 1990; Salataci, 2002; Tiruneh, 2014). However, issues related to strategy instruction have been raised in the literature.

2.3.2.1 Models of Strategy Instruction. Researchers have debated whether language learning strategies are to be taught separately from or integrated with classroom instruction (O'Malley & Chamot, 1990). Researchers such as Derry and Murphy (1986) cited in O'Malley and Chamot (1990) favoured the separate instruction approach because they believed that strategies are similar in all contexts, and that learners might find it challenging to focus on both learning the strategies and the context where they may be taught. Those who agreed with the integrated instruction approach claimed that to teach strategies in context is more effective than teaching them in isolation, because learning in context may facilitate the process of transferring the strategies learnt to new language task contexts (Wenden & Rubin, 1987).

Another issue is whether instruction on language learning strategies should be direct or embedded. In direct instruction learners are informed by their teacher of the aim of the strategy intervention and its likely effectiveness in enhancing their performance in language learning activities (O'Malley & Chamot, 1990). Whereas, within embedded instruction programs, learners are provided with language tasks to solve and which require the use of language strategies, but they are not informed about the aim of practising these strategies (O'Malley & Chamot, 1990).

When it comes to the different models of strategy instruction in the classroom, researchers agreed on following certain steps. First, researchers suggest that teachers should start first with an introduction and modelling of the strategies by explaining when and how to use each strategy. After the presentation of the strategies, teachers then move to providing opportunities for learners to practise them with their guidance until they become familiar and develop some proficiency in using them. Finally, as a final stage, students may be given an opportunity to transfer strategies they have been taught to any other new learning contexts. (Chamot et al., 1999; Chamot & O'Malley 1994; Paris, 1988 as cited in O'Malley & Chamot 1990; Pearson & Dole, 1987 as cited in Cohen, 1998).

Additionally, looking specifically at models for reading comprehension strategy instruction, reciprocal teaching has been claimed to be one of those models used to foster reading comprehension performance. This model was first suggested by Palincsar and A.L. Brown (1984) and it is similar to those in the general strategy instruction models discussed in the previous paragraph. That is, it follows certain steps in teaching the language learning strategies to learners starting by explaining the strategies, providing opportunities for the learners to practise them, guiding and assisting them in applying the strategies, and finally, withdrawing their assistance to make learners autonomous in applying the strategies. Section 2.4.1 provides more details on this reciprocal teaching model. Other researchers such as Cohen and Macaro (2007), Pressley and Harris (2006) recommend that for successful learning, learners may use more than one strategy or a combination of strategies depending on tasks they are engaged in, through multiple strategy instruction.

2.3.2.2 Multiple Strategy Instruction. Pressley and Harris (2006) valued the importance of integrating more than one strategy in one task for more effective reading comprehension, stating that, “Good readers do not rely on individual strategies, however, as they read text, but rather

articulate a repertoire of strategies” (p. 273). Thus, in a language classroom setting, teachers may need to provide learners with instruction on how to use a number of strategies together. However, researchers such as Ardasheva et al. (2017), Grabe (2009), Plonsky (2011) proposed that the number of strategies taught should be between four to eight strategies to help the learners benefit from them. Therefore, since the coordinated use of multiple strategies has been highlighted as important (Grabe, 2009; Grabe & Stoller, 2002), it is helpful to look at studies that have sought to implement multiple-strategy instruction.

Ziyaeemehr (2012) carried out a study to examine how far the reading comprehension proficiency of second year students of electronics in Islamic Azad University improved as a result of a multiple strategy intervention. The intervention was based on an approach known as collaborative strategic reading. There were 40 students aged between 20 to 32 years who participated in the study. They were randomly divided into a control and an experimental group. The control group were taught in the traditional way in which the teacher introduced new words, and the learners translated them into their first language (Persian) and answered the reading comprehension questions. By contrast, the experimental group were taught using the collaborative strategic reading approach (CSR). The latter is based on using previewing strategies (including brainstorming and predicting), ‘click and clunk’ strategies, for handling known and unknown words; ‘get the gist strategies’, and finally ‘wrap up’ strategies, involving summarizing and generating questions. The same reading comprehension passages were used with both the control and the experimental group. Findings of the Independent Samples t-test showed that participants in the experimental group significantly outperformed those in the control group in their reading comprehension scores. This finding indicates the efficacy of multiple instruction approach in enhancing EFL students’ performance.

The effectiveness of multiple- strategy instruction which promotes strategic reading was also confirmed in a quasi- experimental study by Manoli et al. (2016). Their research aimed at examining the possible impact of multiple reading instruction on the reading comprehension performance of 99 Greek- speaking EFL learners ranging between 11- 12 years old using a standardized reading comprehension test and two researcher self- designed reading comprehension tests. The experimental group were instructed through a period of 12 weeks using a multiple- strategy instruction approach (brainstorming and predicting, skimming, scanning, and using the context to guess the meaning of new words). By contrast, the control group participated in the pre, immediate, and delayed post-tests without any particular treatment between the test time- points. A significant difference in reading comprehension performance was detected at post-test between the two groups. That is, there was a significant improvement in the reading comprehension ability in favour of the experimental group at a statistically significant level. Moreover, the Paired T-Test indicated that the growth in the reading comprehension level of the experimental group was statistically significant between the different time points. That is to say, significant differences were found between the pre-test and the post-test, between the pre-test and the follow-up measurement, and between the post-test and the follow-up measurement ($p < .001$). Overall, findings of this study lend support to the feasibility of the multiple-strategy instruction in enhancing EFL learners' proficiency, a conclusion drawn in a number of other studies (Aghaie & Zhang, 2012; Akkakoson, 2013; Dabarera et al., 2014).

Although the feasibility of language learning strategies has been valued in the literature by many researchers (Macaro, 2001; O'Malley & Chamot, 1990; Oxford, 1990; Wenden & Rubin, 1987), the whole concept has been criticized as well. First what a strategy means caused many debates because no agreement has been reached among researchers as to whether it is conscious or

unconscious activity (Abbott, 2006; Birch, 2002; Davies, 1995; Garner, 1987; Grabe, 2009). In addition to this, some scholars argued that language learning strategies are not really important, and that vocabulary is more important. For instance, Swann (2008) claimed that teaching language strategies only is not enough to develop the learners' knowledge about language, that teaching the language itself such as grammar is more important, and that there is little point in teaching strategies to learner if they have some problems with the language itself. Others have criticised language learning strategy research for the lack of theoretical clarity surrounding them (Dörnyei, 2005), lack of valid instruments to measure them (LoCastro, 1994, 1995 as cited in Macaro, 2006), and the fact that strategy effectiveness depends on a number of factors (Ehrman et al., 2003) -the task learners want to undertake, fit with learners' preferred learning styles, and integration with other strategies suitable for accomplishing a task.

Meta -analyses of studies on the effectiveness of strategy instruction conducted by Plonsky (2011), Taylor (2014), and Ardasheva et al. (2017) reported that strategy instruction should be integrated into L2 learning contexts, for its effectiveness on both L2/EFL learning and self-regulated learning. Additionally, a number of 'moderators' or factors were also found to influence the effectiveness of strategy instruction including the context of strategy instruction (EFL/ESL), the length of the instruction, learners' proficiency level, and the number of strategies taught. For example, when examining the effectiveness of strategy instruction with regards to students' proficiency level as one moderator for strategy instruction, researchers across the three meta-analyses studies found that the more skilled learners benefited the most from the strategy instruction compared to their low proficiency counterparts. These findings might be explained in relation to the 'Matthew Effect' hypothesis suggested by Stanovich (1986). This hypothesis claims that a degree of variability exists in the progress in performance between the good and poor learners. This was also

confirmed in a number of studies such as those of Pfost et al. (2012), Habibian and Roslan (2014), in which they found that the good readers were faster in their progress compared to the poor readers who showed a slower pace on improvement in their reading comprehension performance. It also seems to relate to the 'linguistic threshold hypothesis' discussed earlier. Moreover, with regards to the number of strategies taught when delivering strategy instruction, Plonsky (2011), and Ardasheva et al. (2017) agreed that, "A significant less-is more approach" (Ardasheva et al., 2017, p. 571).

In summary, although language learning strategies including reading comprehension strategies have caused much debate among researchers, they can be defined with regards to their importance in language learning development. That is, reading strategies can be described as those deliberate and conscious actions taken by the readers to process a written text based on the goals and the types of texts they are provided with. When strategies are introduced to learners through explicit instruction and training to show them when, how, and why to use them, their awareness and monitoring of the use of different strategies can be emphasized, and hence it is argued that they become more strategic in their reading comprehension strategy use. There have been several investigations into the effect of multiple instruction on reading comprehension performance in both first language (L1) and ESL/EFL settings. CSR is one of those multiple-strategy approaches to strategy instruction that have been explored.

2.4 Collaborative Strategic Reading Approach

While a variety of definitions and classifications of reading strategies in language teaching and learning have been suggested, many reading comprehension researchers agree upon the feasibility of a coordinated utilization of multiple reading strategies. The latter has been

considered more effective than individual reading comprehension strategy instruction (Klinger & Vaughn, 1999; Macaro & Erler, 2008).

One promising approach of multiple strategy instruction that has been the focus of many researchers in the literature, is collaborative strategic reading. The latter complements and forms a part of the broad language learning strategies field, in the sense that the strategies taught within the CSR approach are an important source of strategic behaviour necessary within language learning strategies.

Additionally, while research on language learning strategies is set within a cognitive framework derived from O'Malley and Chamot (1990), the CSR approach is a more socio-cognitive theory of reading which emphasizes collaboration with both the teacher and peers in accomplishing a given reading task (Klinger & Vaughn, 1999). Some however also emphasize that there is a socio-cognitive aspect to L2 language learning strategies research. For example, Oxford and Schramm (2007) claim that, "The definition of L2 strategy is socially mediated action to enhance L2 learning with the help of more skilled people within a sociocultural context" (p.48). This suggests that both language learning strategies and CSR can foster learning through collaboration with more capable peers or with the teacher.

The CSR approach has been primarily implemented within an L1 context for learners with reading deficiencies (Harris, 2019). L2 research by contrast focuses on the feasibility of language learning strategies in fostering L2 learning. Both language learning strategies (Cohen, 2007) and CSR (Fan, 2010, 2015; Klinger & Vaughn 1999) aim at facilitating the process of learning, and making it more enjoyable and motivating for learners. Those working within the L2 language learning strategies field, like those following a CSR approach, also emphasise the importance of fostering learners' autonomy, monitoring, and having control over learning, and

hence self-regulated learning abilities. The following section moves on to describe in greater detail issues related to the theoretical framework of the CSR approach, its implementation procedures with previous studies.

2.4.1 Theoretical Framework of Collaborative Strategic Reading

Collaborative strategic reading or CSR is a learner-centred approach to teaching reading comprehension through explicit instruction and collaborative peer-led discussions (Klinger & Vaughn, 1999). It emphasizes that proficient readers apply a repertoire of reading strategies to monitor the reading process, achieve reading comprehension, and become strategic readers (Gani et al., 2016; Sari & Tamah, 2015). CSR was primarily designed for learners with difficulties or learning disabilities, and has roots in the sociocultural theory of learning and adapted its framework from reciprocal teaching and cooperative learning (Boardman et al., 2016; Klinger et al., 2004). Learners with reading comprehension disabilities seem to benefit from working in environments where group work activities are emphasized, as this may help them to reduce their anxiety, and increase their motivation in accomplishing the tasks (Gersten et al., 2001; Vaughn et al., 2011). That is, the amount of modelling or scaffolding the less skilled learners receive when exposed to group work activities might be beneficial for increasing their motivation as well as their performance in the language activities.

Vygotsky (1978) holds the view that social interaction is important in enhancing the development of learning. In his socio-cultural theory of learning, he emphasizes the notion of the zone of proximal development (ZPD) or the distance between what people can achieve on their own and what they can accomplish with assistance from more knowledgeable others. That is, when

learners are engaged in joint collaboration with more skilled others, they maximize their chances in learning and develop their cognitive skills in solving problems (Shabani et al., 2010).

Another potential aspect of the sociocultural theory of learning is mediation or peer-mediated learning which posits that the human mind (human thinking) is mediated (Vygotsky, 1978). In other words, human activities such as reading are constructed first on the interpersonal level (social) then on the intrapersonal level (individual level). That is, once learners are involved in peer mediated learning, they are all provided with opportunities to improve their social and academic performance, monitor progress and increase their verbal interaction, and get immediate feedback through student peer-led discussions (Vaughn et al., 2001). Scaffolding (guidance from more competent individuals) is also an essential element in developing cognitive skills, because when individuals are engaged in social interaction with others, they listen, learn, exchange ideas, construct and negotiate meaning, and modify their thoughts through small group discussions (Nostratinia & Mohammadi, 2017).

Collaborative peer-dialogue which stresses the importance of dialogue in enhancing effective language learning is another basic tenet of the sociocultural nature of learning (Vaughn et al., 2001). It is commonly believed by researchers that collaborative dialogue is a crucial notion in improving learners' ability to construct knowledge through dialogical scaffolding with their peers, express what is in their mind, and hence accomplish a deeper level of cognitive development (Abvali & Mohammadi, 2016; Swain & Watanabe, 2012). Researchers also referred to dialogue as both a cognitive and a social tool to mediate language learning in which learners scaffold each other, interact with each other to give and gain assistance in dealing with language practices, and to contribute to decision making and problem solving with their groups (Swain et al., 2002; Webb,

2009). A number of examples from the literature, furthermore, provide some insights into the facilitative role of collaborative peer dialogue as an effective means of strengthening learners' cognitive skills and achievements in language learning (Abvali & Mohammadi, 2016; Khodamoradi et al., 2013; Zeng & Takatsuka, 2009).

In their study, Abvali and Mohammadi (2016) used speaking ability measurements as pre and post-tests to answer two research questions related to the effect of collaborative dialogue on the Iranian learners' speaking performance, and any significant differences between males and females' speaking ability within this approach. Speaking tests derived from the Cambridge Preliminary English Test (PET) were used at pre and post-test to test aspects related to grammar, vocabulary, pronunciation, fluency, and the degree of interaction with the examiner. 70 pre-intermediate students were selected from an English language centre in Iran aged between 14 and 30, and then divided into a control and an experimental group. In the experimental group, learners were assigned to peer-collaborative dialogue activities, namely, jigsaw, text-reconstruction, and dictogloss to develop the speaking skill for a period of six weeks. In the control group the teacher used the same course book as with the experimental group, but participants were not exposed to any collaborative tasks.

The first activity used with the experimental group was the jigsaw. In this practice, participants were provided with pictures selected from the course book (designed by the language centre), and then the teacher split the pictures into two groups and asked the learners to discuss with each other the situations presented in each picture. Text re-construction is another collaborative activity applied with the experimental group. In this task, students were required to complete a text with omitted words, and then discussed with each other the general focus of it. The last

collaborative dialogue task was the dictogloss activity. The main aim of dictogloss for the learners was to fully reconstruct the text through listening to the teacher reading a text and noting down key words about the text.

Abvali and Mohammadi concluded that the tasks implemented in their study were effective elements and played an important role in improving the pre-intermediate learners' speaking proficiency. At pre-test, there was no significant differences between the speaking performances of the control and the experimental group, and between male and female participants. At post-test, the speaking ability of the two groups differed significantly, to the advantage of the experimental group, with a small effect size. Additionally, there was also a statistically significant difference between males and females' performance in the speaking test at post-test, with females outperforming males with a large effect size. Overall, although this study was conducted over a short period of time, its findings lend support to the claim that collaborative dialogue has a vital role in enhancing language learning, speaking ability in this case.

The efficacy of collaborative dialogue in language learning was also supported by findings from Khodamoradi et al.'s study (2013). Its aim was to investigate how well peer collaborative dialogue, in combination with teacher's feedback, could help 142 EFL students in Iran to acquire the English tenses. Tense acquisition was measured through a pre- test, weekly post-test, and a final post-test. Before initiating the training program, students were distributed randomly in five classes; three as a peer collaborative dialogue group and two were used as a teacher's scaffolding group.

First, a diagnostic test designed by the researchers was administered as a pre-test to evaluate the participant' familiarity and knowledge about English tenses. Based on the results of the

diagnostic test, learners were divided into six sub-groups: three subgroups containing high achieving learners, and other three subgroups of low achievers. The aim of dividing participants into low and high achievers was to organise the kind of interaction among them. That is, every low or high achiever learner had to interact with the teacher, a high, or a low partner. The test included two sections; the first one was a multiple-choice section with 36 questions, whereas, the second part of the test was two cloze passage sections in which students were required to fill in the gaps with the appropriate tense form.

In the treatment period which lasted for 12 weeks, a pamphlet composed of the structure, the meaning, and the use of nine English language tenses was used as a teaching material. The training session involved three phases; the first one was a presentation of an English tense by the teacher for both scaffolding and peer collaborative dialogue groups for 15 minutes. A 30 minutes' activity about the use of the tense taught was delivered to participants during the second phase. One group received assistance from the teacher to do the grammar exercise (the scaffolding group), whereas the second group was required to solve it through peer collaboration (with a partner). Lastly, the weekly post-test (included the same types of questions as the pre-test; 36 multiple choice, and two cloze paragraphs) was given to participants in the third phase.

At the end of the intervention, students took a post-test, which was again similar to that in the pre, and the weekly post-tests. Both weekly post-test and post-test aimed at tracking participants' grammatical knowledge improvement as a result of both teacher's scaffolding and peer collaborative dialogue. Significant improvement with a small effect size in grammatical knowledge was found only for the low achieving participants who interacted with the teacher and with the high achievers, more than within the group of low-low achievers as the ANOVA results indicated.

Findings of this study confirm the claim of the importance of scaffolding and peer dialogue interactions in language learning. That is, learners' language performance might not be only enhanced with assistance from the teacher, but also with learning environments where interaction with peers is emphasized. That is, more skilled peers may also help the less skilled learners when working in groups in overcoming their deficiencies, and hence increasing their performance. In congruence with the standpoint of Abvali and Mohammadi (2016), and Khodamoradi et al. (2013), other researchers such as Storch (2007), and Chen (2020) also stress the feasibility of peer dialogue interaction during collaborative tasks in language learning.

Another significant aspect of CSR is reciprocal teaching; a model for teaching comprehension strategies and fostering reading performance proposed first by Palincsar and A.L. Brown (1984). As its pioneers Palincsar and A.L. Brown (1984) outlined, reciprocal teaching is a set of practical cognitive strategies taught to learners, and that may be of great utility in enhancing their reading comprehension abilities through five practical phases: (a) Teacher demonstration: to provide students with a big picture on the first day of the strategies to be taught. (b) Direct instruction and guided practice: include explicit instruction and in-depth explanation on how to use each of the reading strategies using prompts. (c) Formulating teacher-student groups: in which the teacher acts as a learning leader to initiate discussions about the text in small groups of four to six members, provide assistance when necessary, and then gradually fades guidance when learners become competent enough in using the strategies. (d) Student-led groups: to provide learners with opportunities to exchange their thoughts, enhance their level of self-confidence, and benefit from their more knowledgeable peers when they exchange turns in leading discussions about reading the passage. (e) Students' independent use of the strategies: once learners become more skilful in using the strategies, the teachers withdraw their assistance, to make learners autonomous in using the

strategies, and to monitor their own understanding of the text (Palincsar & A.L. Brown, 1984; Seymour & Osana, 2003). This model of strategy instruction shares similarities with the general strategy instruction models discussed in Section 2.3.2.1.

According to Ahmadi and Gilakjani (2012), reciprocal teaching originates from the zone of proximal development and proleptic teaching as two sociocultural theories, which aim at improving students' reading comprehension and self-regulatory reading through dialogue, strategies, and scaffolding:

1. The zone of proximal development proposed by Vygotsky (1978) focuses on learners' actual development level (their development when learning by themselves), and potential development level when interacting with more capable others.
2. Proleptic teaching: that is the teacher's expectations of students' abilities to perform a given task without focusing on their actual skills. In other words, the teacher has high expectations that students can successfully perform a given task regardless of their ability. It aims to transfer the responsibility of performing a task from the teacher to the learner and puts the learner at the centre of the teaching and learning process (Ostovar-Namaghi & Shah Hosseini, 2011).

For an effective application of reading comprehension strategies within the reciprocal teaching approach, teachers have to provide learners with the necessary instruction about the use of the comprehension strategies, and to model their use through a think aloud technique (Fan, 2010). In each reciprocal teaching implementation session, after the teacher acts as the first leader in modelling, teaching, and enhancing learners' strategies use, each individual is offered an opportunity to be a learning leader to perform the four strategies (predict, generate questions, clarify

and summarize) within the group with guidance from the teacher and other students (Rosenshine & Meister, 1994).

When it comes to practice, Yang (2010) suggested a number of steps to follow within the reciprocal teaching approach. First, the teacher selects one part of a written passage to read for the learners, then shows them how to predict, generate questions, clarify, and summarize. For the predicting strategy, learners make predictions and inferences of what will happen in the text by activating their prior knowledge of the topic, to be able to monitor their reading. In the questioning strategy, learners are required to read for gist, ask and answer questions, exchange their answers with their peers to check their comprehension of the passage. The purpose of the clarification strategy is to make the learners aware of their own understanding of the text in trying to decode unfamiliar words, new vocabulary, and unclear concepts that may hinder the successful understanding of the ongoing passage. Students are required to re-construct the main idea of the text and delete unnecessary details to be able to produce an effective text-summary using their own words. After that, the teacher provides the learners with a scaffolding opportunity to become proficient in the use of these strategies, and help them apply the strategies successfully, through initiating dialogues between a dialogue leader (the teacher or a more competent student) and learners until they develop enough competence in using the strategies (Alfassi et al., 2009; Izadi & Nowrouzi, 2016).

2.4.2 The CSR Implementation Procedures

CSR has been claimed to have roots in reciprocal teaching instruction and emphasizes the explicit instruction in training learners on the use of clusters of strategies through collaborative peer-led discussions (Klinger & Vaughn, 1999; Vaughn et al., 2001). Researchers agree upon

following certain steps that can have a vital role in addressing the CSR model in the classroom (Alqarni, 2015; Boardman et al., 2016; Karabuga & Kaya, 2013; Klinger & Vaughn, 1999). The phases they proposed are summarized as follows:

At the outset, the whole class is provided with a set of instructions on how, when, and where to apply the reading strategies using a think aloud technique. According to Klinger and Vaughn (1999), the first to implement the CSR approach in language teaching, there are four clusters of reading strategies to be implemented before, during, and after reading within this approach:

1. Preview: is a pre-reading activity which aims to activate the readers' previous knowledge, and also to predict what may occur later in the text.
2. Click and Clunk: During this phase which is implemented while reading, students try to identify the clunks- difficult words or concepts in the text- and they are taught how to apply the fix-up strategies to guess the meaning of those clunks. For example, when learners encounter an unknown word that causes them difficulty in understanding the ongoing text, they may look it up in a dictionary, divide the word into smaller parts by excluding any suffixes or prefixes.
3. Get the gist: this is practised while reading the text. It intends to train students how to identify the main idea of a text, which is an important skill for comprehending a paragraph. Learners are required to disregard all the unnecessary details in the passage and formulate in their words the most important theme discussed in the text.
4. Wrap-up: this is used after reading and it aims to offer a chance for learners to review the text read. The goal is to generate questions about the text and to summarize the key points to check their understanding of the whole passage.

Then, in the next step, the learners practise the strategies learnt with different tasks with the help of their teacher until they develop enough skills in using them. After that, small heterogeneous groups are assigned to apply the reading strategies (generally each group includes between four and five members). The aim of group work is to give an opportunity to learners to help their group members in applying the strategies, and to discuss what they have learnt from the text. Each member of the group is assigned a particular role to perform within the team. Likewise, rotating roles seems to be an important aspect in CSR instructional teaching, since it provides learners with a chance to try out all roles within their original groups. Learners' roles within the CSR approach are described by Klinger and Vaughn (1999, p. 743) as:

The leader: leads the group in the implementation of CSR by saying what to read next and what strategy to apply next.

The clunk expert: uses clunk cards to remind the group of the steps to follow when trying to figure out a difficult word or concept.

The gist expert: guides the group toward the development of a gist and determines that the gist contains the most important idea(s) but no unnecessary details.

The announcer: calls on different group members to read or share an idea and makes sure that everyone participates and only one person talks at a time.

The encourager: Watches the group and gives feedback; looks for behaviours to praise; encourages all group members to participate in the discussion and assist one another; evaluates how well the group has worked together and gives suggestions for improvement.

The timekeeper: lets group members know how much time they have to write in their learning logs or complete a section of the text they are reading; keeps track of time and reminds the group to stay focused (if necessary).

Within the CSR approach, mediated learning and learner- centredness are emphasized, with the teacher acting as a facilitator in creating the environment for dialogue which is also central to CSR. Through mediated learning, students are offered scaffolding opportunities from more competent others, that is both their teachers and more skilled peers, in order to achieve better results. Thus, the teacher's role, however, is more than just providing help when needed (Johnson & Johnson, 2008). As Oxford and Schramm (2007) stated, "Through interactive dialogue, the teacher models and teaches higher-order cognitive skills... The dialogue is gradually internalized, helping the learner become increasingly self-regulated". (p. 51). That is, once learning occurs through social interaction with more knowledgeable people, learners' self-regulated abilities increase because the teacher models and provides insights about the use of given strategies. Moreover, within group work activities and through social interaction in the form of dialogues, the teacher's scaffolding allows students to use communication strategies to go beyond their current language level and thus provide them with opportunities for second language learning improvement and self-regulated learning (Cohen & Macaro, 2007; Kozulin et al., 2003). The dialogues with more capable others which mediate social learning then become "internalized and transformed by the learner through several stages: first, the social speech occurring in dialogue; second, private or egocentric speech; and finally, internal speech". (Oxford & Schramm ,2007, p. 53). Once learners become competent in their own learning, the help from the more knowledgeable others can easily be withdrawn (Kozulin et al., 2003).

Furthermore, the role of the teacher within the CSR approach which also has roots in the reciprocal teaching approach, is to help students to become skilled in mastering the strategies of clarifying, summarizing and generating questions as suggested by Brown and Palincsar (1989) after explaining and modelling those strategies. Once proficient in the use of the strategies, students are required to try them in small groups with support from the teacher, for example, by directing them in formulating questions for the strategy of generating questions to check their comprehension. Then, “The teacher gradually assumes the less active role of coach, giving students feedback and encouraging them” (Webb, 2009, p.11).

2.4.3 Previous Studies on CSR

In a key study of L1 learning, Klinger et al. (1998) carried out a quasi-experimental study to provide evidence about the effect of CSR on 141 fourth grade students in America over a period of 11 days. The experimental group including 85 students was organized in three classes. The participants were engaged in peer-led discussions where the four clusters of reading strategies were presented; before, during, and after reading to assist one another in completing the reading comprehension tasks. On the other hand, the control group (56 participants) were not assigned to any group work and reading strategies. There were only questions asked by the teacher from the textbook to lead discussions in the classroom covering the same content as the experimental group.

On the first day of the intervention, the researchers introduced an outline for the use of the four reading strategies through a think aloud technique which provided explicit instruction on how, when, and why to use the strategies. For example, prior to reading, previewing includes brainstorming their ideas and predicting what information would be learnt in the text. After that, participants were given opportunities to try out the strategies until they felt proficient enough in

using them, then they were divided into groups with five or six members within each group. Learners within each group had the chance to perform the role of the group-leader to instruct the whole group which strategy to apply with the scaffolding of the researchers.

Three different methods were employed by Klinger et al. (1998) to test the influence of the training on reading comprehension development of the participants. A standardized reading comprehension test and a content measure test were administered on the same day at the beginning and the end of the training program to students in both groups. The former test was adopted from 'Gates-MacGinitie Reading Tests' which measures reading comprehension performance. The content measure test involved different types of questions derived from the textbook (short answer questions, multiple choice questions, fill in the gaps, and defining vocabulary). The last method used to collect data was audiotapes of learners' interaction during cooperative learning work.

The pre-and post-test reading comprehension analysis using paired samples t-tests illustrated that the experimental group performed significantly better than the control group with a large effect size. Therefore, findings of this study suggested that CSR is an influential form of teaching instruction that has a pivotal role in enhancing reading comprehension abilities of fourth grade learners in L1 contexts.

CSR has further been claimed to be fundamental to promote reading comprehension skill, strategic reading, and autonomy in second language learning. In her study, Fan (2015) examined the extent to which CSR can foster reading comprehension of expository texts and learning autonomy of 54 EFL university learners in Taiwan, majoring in electrical engineering and computer information engineering. There were a number of instruments available for measuring autonomy,

reading comprehension ability, and strategic reading including a questionnaire and semi-structured group interviews.

Results of the questionnaire survey and the interviews about the learners' attitudes towards the CSR reading intervention, the impact of CSR on their English language learning, confirmed that learners believed that the intervention was helpful for them to increase their performance in the reading comprehension activities, as well as in improving their learning autonomy. They stated that CSR made them actively engaged in the process of learning through interaction with their group members, it was also helpful for them in getting the meaning of the difficult words they encountered, distinguishing the main idea from the supporting details, constructing an effective summary of the text, and improving their vocabulary and grammar.

Additionally, although claiming CSR was beneficial for them, students cited some dilemmas they encountered when working in CSR environment. Those problems were related to the amount of unfamiliar words they encountered while reading, difficult grammatical structures that prevented them from a successful understanding of the passage, and the absenteeism of some members of their group. A limitation of this study is that Fan only gathered data on students' perceptions on the impact of the CSR approach on students' reading comprehension performance but did not prove that their performance increased empirically.

Another study, conducted by Gani et al. (2016), explored the effect of the CSR on fostering 67 EFL learners' reading comprehension performance in Indonesia using a reading comprehension test at pre-test and post-test, and a questionnaire. The total sample was divided randomly into a control group and an experimental group. The 35 students in the control group were taught in a

traditional teacher-led reading approach, whereas, the CSR approach was implemented with the 32 participants in the experimental group.

Firstly, a reading comprehension test was administered to participants of both groups at the beginning of the intervention. The structure of the test was to read a descriptive paragraph and answer 20 questions related to the text. Then, the second phase was an introduction of the treatment sessions using the CSR approach. After that, a post-test was delivered to check whether the participants had made progress. As a final stage, a questionnaire was administered to the experimental group to gain insight about their attitudes towards the use of CSR in the classroom. The results of the study using Z scores revealed that participants taught in the CSR approach significantly outperformed those in the teacher-led reading approach. In addition, results of the questionnaire further suggested that students within the CSR approach had positive attitudes towards this approach in enhancing their reading ability. They commented that CSR was helpful in encouraging them to read, and it was also influential in developing positive relationships with their team members.

In a recent study conducted by Babapour et al. (2019), the beneficial effect of the CSR approach in enhancing reading comprehension was supported. In their quasi experimental study, 144 intermediate and elementary female students in a language institute in Iran aged between 14 and 20 were randomly assigned to either a control group, or one of the experimental groups who receiver either the collaborative strategic reading instruction (CSR), or the shadow reading instruction (SHR) in ten sessions.

In the control group, the reading classes were based on their regular teaching where the teacher read the passages and explained them to the learners, whereas, the experimental groups

were exposed to two different interventions. The CSR group teaching was based on the teaching of the four clusters of strategies (previewing, identifying clinks and clunks, getting the gist, and summarizing). The SHR intervention took the form a reader and a shadower, where the reader tried to read a text to the shadower to summarize its input. In order to ensure that each student performed both roles of the reader and the shadower, each reading comprehension passage provided was separated to two parts. In the first part, both the reader and the shadower read that part of the text silently. After that, while the reader read loudly, the shadower had to listen then to summarize that part orally to the reader. Roles were reversed in dealing with the second part of the text where the reader in the first part became the shadower and the shadower was the reader in this stage. Questions about the text were allowed to discuss the passages during this shadow reading. Participants' reading comprehension proficiency was tested before and after the intervention using reading comprehension tests. ANOVA results followed by post hoc tests revealed a main effect of the intervention, with the performance of the CSR group being significantly higher than the SHR and the control group, and the SHR group achieving significantly better than the control group.

Overall, despite the fact that the existing research has recognized the critical role the CSR approach played in reading comprehension achievement, there seem to be some weaknesses. As an illustration, the length of the treatment period provided by Klinger et al. (1998) was too short. Tracking the progress of learners' reading abilities may not be reliable over a period of only 11 days. Therefore, the study would have been more convincing if it had been conducted over a long period of time. Besides this, the possible impact of the CSR approach was only examined with the use of expository texts, so, using a variety of text types may result in different outcomes. Moreover, one of the problems with the instruments the researchers used to measure learners' ability in the reading comprehension activities, and their perceptions of the usefulness of the reading approach

(CSR) is that they focused only on formal reading comprehension tests and either questionnaires or interviews to evaluate their perceptions of the CSR intervention. The adoption of various measures in exploring the reading comprehension performance and evaluating a particular reading model would be valuable, since they provide a multidimensional picture of the actual level of learners, and their potential development within an intervention program.

Nevertheless, while a considerable amount of literature has been published on the positive effect of the CSR approach in enhancing the reading comprehension abilities of learners, there are also studies that suggest it is less effective. For example, Zoghi et al. (2010) tried to obtain further in-depth information on the effectiveness of a modified CSR reading instructional approach on Iranian EFL university students' reading comprehension over six months. No statistically significant improvement was found (as analysis of the dependent-samples t-test showed) in the mean scores of participants' reading comprehension performance at post-test. Although no significant improvement was gained, results obtained from the CSR opinionnaires demonstrated that more than 87% of the participants held positive perceptions of the CSR program implementation in the classroom. Students claimed that CSR was helpful for them in the sense that they could assist one another when working collaboratively in the reading comprehension activities. This can be interpreted that the instruction may have been insufficient to have actual impact on reading comprehension. Another explanation for this difference between reality and perception may be attributed to the fact that the study did not have a control group with whom the findings may be compared, and hence it seemed that students did not significantly gain higher results and improve their reading comprehension performance as a result of the CSR training.

In summary, the aforementioned studies suggest the potential efficacy of the CSR approach in enhancing the reading comprehension performance, but with certain gaps that need to be filled by further research. A key issue is the effectiveness of both the teaching materials and the amount of discussion students are provided with when working under the CSR approach. Hattie and Timperly (2007) emphasized the importance of the ‘human and material resources’ in helping learners to overcome their learning deficiencies and hence enhance their language performance, although the development in their learning may take longer to appear, especially, when the intervention is implemented with struggling readers (Vaughn et al., 2012). Furthermore, development in learners’ reading comprehension in the aforementioned studies seem mainly related to the CSR strategy instruction they were exposed to, which made them more strategic readers. Through strategy instruction, learners may increase their ability to have control over their learning, becoming autonomous and self-directed in their learning, being motivated, and thus improving their performance, as well as enhancing a positive attitude towards their abilities in performing the tasks by increasing their sense of self-efficacy (Zimmerman, 2002).

2.5 Self-Efficacy Perceptions

Individuals’ personal beliefs about their efficacy in managing their actions, having control over their lives’ situations, are a pervasive notion of their human agency (Schunk et al., 2014). The latter refers to the ability to make choices to perform certain tasks, or to be resilient to do them, and it is mainly affected by judgments people make about their capacities to initiate such actions, or what is known as self-efficacy beliefs (Bandura, 1997).

2.5.1 Self-Efficacy and Social Cognitive Theory

The self-efficacy construct was first developed by Albert Bandura within a psychotherapy context, and it is conceptualized as “beliefs in one’s capabilities to organize and execute the courses of action required to manage prospective situations. Efficacy beliefs influence how people think, feel, motivate themselves, and act” (Bandura, 1995, p. 2). In other words, it is the beliefs about one’s abilities that play a vital role in influencing confidence to perform particular tasks, persisting or disengaging with doing them when difficulties are encountered. Therefore, the initiation and completion of tasks would be determined by the level of self-efficacy beliefs the individuals possess; higher sense of self-efficacy works as an incentive and a motivational variable to put in more effort and persist in exercising the task (Boakye, 2015; Ritchie, 2016).

There are many aspects in which self-efficacy beliefs differ from other concepts such as self-confidence and self-concept (Schunk et al., 2014; Zimmerman, 2000 a). Firstly, Pajares and Schunk (2005) referred to self-concept as an umbrella term which covers self-efficacy; while self-efficacy refers to individuals’ judgments of their abilities to perform a task, self-concept is the evaluation of one’s competencies. That is, self-efficacy measurements are gained through asking questions related to possessing high or low self-confidence such as ‘can I read, or write’, whereas, self-concept can be ascertained through questions regarding how positively or negatively individuals see themselves such as: do I like myself, and how do I feel about myself as a language learner (Pajares & Schunk, 2005). Furthermore, self-concept judgments are less context dependent, and based on social and individual comparisons by comparing performances with others, and with one’s achievements in previous tasks as well (individual comparisons) (Marsh et al., 1991). Self-efficacy on the other hand is task and context dependent (Bandura, 1997; Zimmerman, 2000a). That

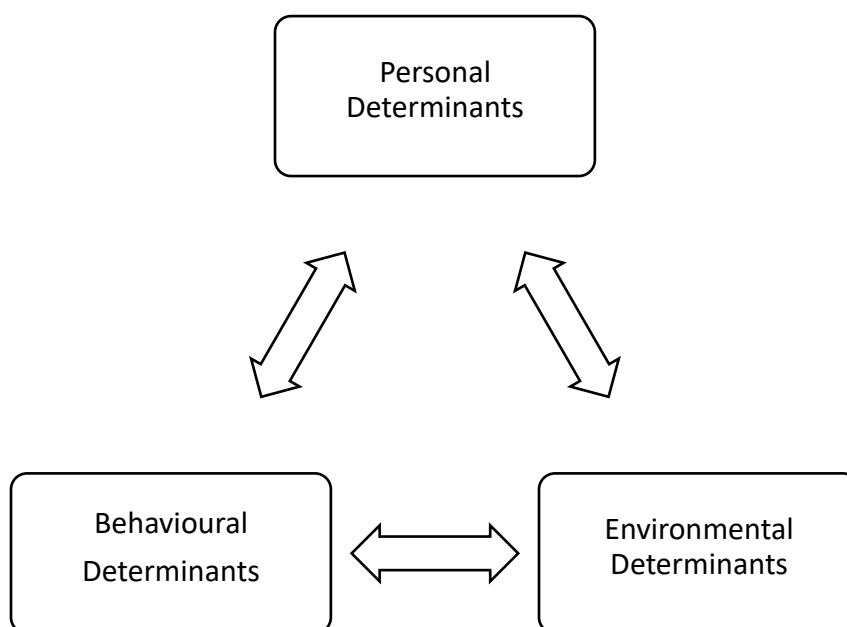
is, language learners may be more self-efficacious in dealing with spoken tests rather than with reading for example.

Self-efficacy perceptions as one aspect of the social cognitive theory suggested by Bandura (1995) affect how well individuals function with regards to their cognitive, motivational, affective and decisional actions. At the cognitive level, self-efficacy beliefs can determine whether people think in a positive or negative way, how well they are motivated to reach their predetermined goals, and to explain attributions for their successes and failures (Bandura, 1997). Self-beliefs about one's capabilities may also have an impact on the basis of one's emotional life (if they feel stressed, depressed towards doing a given activity), and the choice of activities to be undertaken (Bandura, 2001). That is, if learners perceive their self-efficacy to be low, they are likely to feel anxious about doing certain language tasks, they hence quickly avoid these tasks accomplishment.

From a socio cognitive perspective, human activities are shaped by a reciprocal causation in which an interplay between three factors - personal (cognitive, affective, and biological), behavioural (efforts and persistence to complete tasks) and environmental - operate as a determinant of human performance, motivation and thoughts (Bandura, 2001). The interaction between these three factors is reciprocal in the sense that the way people give explanations for their outcomes contributes to changes in the environment and their self-beliefs, and hence alters their performance. The multi-directional causal relationship of person, environment, and behaviour is highlighted in Figure 2.1.

Figure 2.1

Triadic Reciprocal Causation in Social Cognitive Theory (Bandura, 2001, p. 266).



Within this model, self-efficacy plays a vital role in affecting personal and behavioural determinants as it acts upon them. That is, self-efficacy beliefs may be promoted within the environment as an external factor and interact to contribute to the accomplishment of certain activities, to self-development, and to effective adjustments of human behaviours. Factors that may influence self-efficacy beliefs will be discussed in detail in the next subsection.

2.5.2 Sources of Self-Efficacy

Ersanli (2015) pointed out that it is students' self-beliefs, about their capabilities to perform a given task that causes variation in their level of interest and motivation to learn, even when they have been exposed to the same learning environment, and possess the same cognitive abilities. In

turn, their self-beliefs are determined by several internal and external factors, Different aspects that might have an influence on individuals' self-efficacy beliefs in accomplishing activities are categorized into mastery experiences, vicarious experiences, verbal persuasion, physiological and affective states (Bandura, 1995).

The first source of self - efficacy is 'enactive mastery experience' which denotes that personal experiences and attainments can have great impact on individuals' judgment of their competencies (Bandura, 1997). That is, success or failure in performing tasks in the past shapes how people feel about initiating similar activities. For instance, if learners have achieved good results in a previously undertaken language learning activity, their self-efficacy to attain better grades in a similar upcoming test rise, and their chances to fail are felt to be decreased. Usher and Pajares (2008) pointed out that judgments of individuals' capabilities are built upon certain interpretations that they made about their effort. That is, their confidence to fulfil tasks similar to the one they were already engaged in rises if they believe that effort devoted to accomplishing them was satisfactory and goes hand in hand with their predetermined goals. Accordingly, effort spent in performing a task may have an enduring effect on self-efficacy appraisal. However, learners' beliefs about undertaking activities may be negatively affected if they devoted more effort but they still experience failure (Usher & Pajares, 2008).

In addition to enactive mastery experience, learners' self-efficacy might be affected by their peers' and teacher's performances when they observe them accomplishing certain activities. This is what Bandura (1997) referred to as 'vicarious experiences. In an academic context, having social models whether more or less experienced in comparison with the learner' skills play a crucial role in boosting or undermining their sense of self- efficacy. Modelling works as a determinant of learners' beliefs in the sense that they are likely to change what they believe about their skills in

pursuing a task by observing that model's attainments (success or failure) in similar situations (Schunk et al., 2014). Because the sense of self-efficacy of skilled learners would be higher than that of the less skilled learners (Unrau et al., 2018), peer modeling is claimed to be effective in enhancing the sense of self-efficacy of less skilled or struggling learners as it provides them with an opportunity to observe the way proficient learners accomplish the activities (Usher & Schunk, 2018; Zimmerman, 2013).

Britner and Pajares (2006), however, have criticized the view that individuals may construct their self-efficacy through observing a life model. They argued that observing a model's performance as a source of self-efficacy beliefs is not as strong as individuals' past performance because the model's failure may result in discouraging their confidence and motivation in initiating the activities. Usher and Pajares (2008) also argued that observing a model's failure may result in diminishing motivation in initiating similar tasks, and hence their sense of self-efficacy and performance. Nevertheless, it is possible that both views on the importance of vicarious experiences and mastery experiences are true. It is the action of observing a role model performing a task combined with own personal experiences whether success or lack of success that may determine to a certain extent how confident learners feel about themselves in accomplishing the same activities.

Verbal persuasion to which individuals are exposed is also an important aspect that may affect how they perceive their capabilities to perform a given task. It is through feedback and positive encouragement that individuals receive from others that their self-efficacy beliefs about their achievements may be reinforced (Bandura, 1997; Schunk et al., 2014). Feedback on individuals' attainments may increase the sense of their self-efficacy through positive judgments of

their capabilities, which assist them to persist and accomplish the desired behaviours despite the difficulties they may encounter.

The last source that informs people's level of self-efficacy is their physiological and affective circumstances (Bandura, 1997, 2001). Emotional states that individuals go through influence, to some extent, their successful or unsuccessful accomplishments. Expectations of individuals' positive or negative achievements are gauged by their engagement in activities under poor or strong physiological environment (fatigue), and under other affective circumstances too (anger, anxiety, stress, motivation) (Bandura, 1997). Generally, reduction of negative affective states such as anxiety, and fostering a positive physical state may lead to high self-efficacy beliefs, and hence persistence in performing activities. Conversely, working under a stressful environment may contribute to impediment of performance because of low self-efficacy beliefs (Usher & Pajares, 2008).

A robust relationship is claimed to exist between self-efficacy beliefs, effort, goals, persistence, and performance, and which are bounded by other factors (mastery experiences, vicarious experiences, social persuasion, physiological and affective factors) (Bandura, 1995, 1997, 2001). Perceived self-efficacy to persist or give up on a learning activity changes according to the quality of the task at hand (easy or difficult, familiarity or unfamiliarity), time allocated to exert it, and the context of doing the activity (in the morning, at night, in the classroom, or at home) (Ritchie, 2016).

Additionally, researchers such as Casteel et al. (2000), and Chapman and Tunmer (2003) referred to the use of teaching materials as another source which might be effective in increasing learners' expectations of success. That is, when learners are provided with guidelines on the use of

certain strategies, for example, in the form of ‘reference cards’, their motivation and persistence to undertake the tasks might be enhanced because the materials may help them overcome the difficulties they might encounter such as difficult words. Therefore, making judgments about one’s capabilities to handle certain activities would be effective through taking into consideration all the factors mentioned previously.

2.5.3 Self-Efficacy, Self-Regulation, and Motivation in Learning

Within a teaching and learning setting, a strong correlation has been proposed to link self-efficacy, self-regulation, and motivation. The use of goal setting, self-monitoring, self-evaluation, and strategies as processes to regulate one’s learning would give learners a sense of agency over their motivational learning (tasks selection, effort expenditure, persistence, and affective states), and self-efficacy perceptions (Usher & Schunk, 2018; Schunk, 2001; Zimmerman, 2000 b).

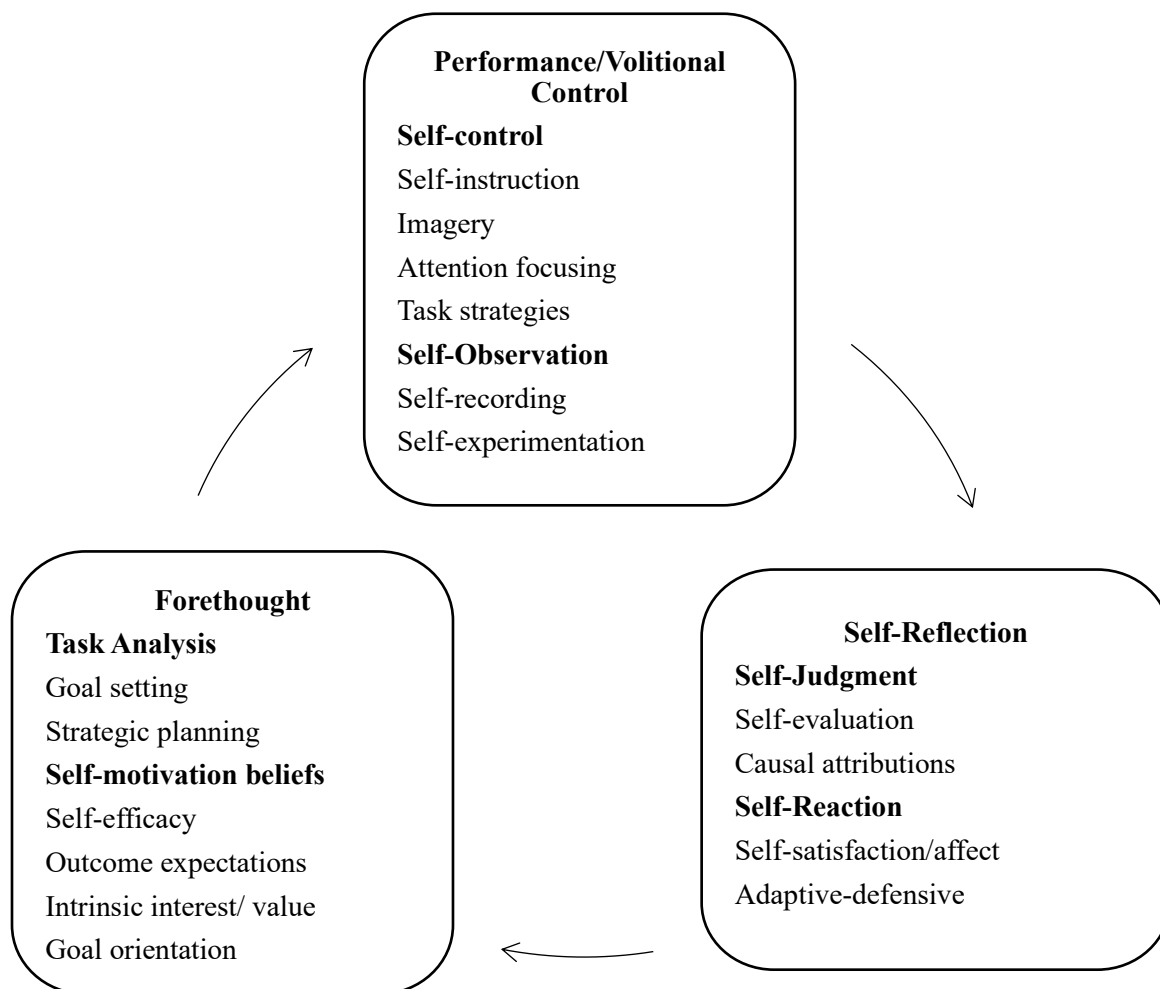
Self-regulated learning denotes that students’ positive judgments of their capabilities increase their competencies in setting challenging goals and working hard to achieve them (Schuck & Greene, 2018). In order to reach their predetermined goals, self-efficacious learners monitor their learning, and show persistence in accomplishing their learning goals, whereas those with low self-efficacy may easily quit a learning task if faced with difficulties and avoid similar activities in the future (Bandura, 2006; Zimmerman, 2000 b). Self-efficacy beliefs also have an impact on learners’ self-evaluation of their performances and motivate their use of learning strategies to move forward achieving their goals (Zimmerman, 2002). Compared to self-efficacious learners, those with low self-efficacy doubt their abilities in overcoming obstacles they encounter while learning and give up on their consistence (Bandura, 1997, 2001). When engaged in activities, those learners do not regulate their own thoughts about how they will handle them, however, self-efficacy alone is not

sufficient in making learners self-regulators with agency over their learning (Ritchie, 2016). That is, learners need to be motivated first to be able to use self-regulatory techniques, and hence to improve their level of self-efficacy perceptions.

In his model of self-regulated learning, Zimmerman (2000 b) suggested that there are three phases which interact to form the model; the forethought, performance, and reflection phases as shown in Figure 2.2 below.

Figure 2.2

Cyclical Model of Self-Regulated Learning (Zimmerman, 2000 b, p. 16)



Within this model, the three phases of self-regulation are in a cyclical relationship. That is, self-regulated learners spend much time on the forethought phase planning for their tasks by, for example, thinking of the appropriate strategies to apply based on the aim of the task. Self-motivation beliefs within the forethought phase may have an influential role in affecting the type of strategies learners may use, and hence their performance (Usher & Schunk, 2018). High levels of self-efficacy beliefs may have an effect on the use of self-regulation strategies, and that using those strategies may help the learners to increase their level of self-efficacy perceptions and language performance (Usher & Pajares, 2008).

Additionally, students' initiation of the tasks is also influenced by their level of motivation. If they are motivated to learn, they are more likely to apply the appropriate self-regulatory strategies, and are likely to be motivated to complete the tasks (Zimmerman, 2000 a). Students with high sense of self-efficacy prefer to undertake a more challenging activity as opposed to their counterparts with low sense of self-efficacy, by putting in more effort into showing persistence and confidence to solve problems through using certain learning strategies (Efklides et al., 2018; Usher & Schunk, 2018; Zimmerman, 1992). Ideally, self-efficacious students can cope with their emotional states (stress, anger, fatigue) and resist in spite of all the challenges that they may encounter (Bandura, 1997).

In the performance phase of the self-regulation learning model, learners make use of certain strategies they plan in the forethought phase and think whether assistance is needed for the completion of the tasks (Usher & Schunk, 2018). During the last phase, learners evaluate their performance by thinking of the causes of their outcomes as well as the effectiveness of the strategies they used (Usher & Schunk, 2018). Self-satisfaction may help learners to increase their self-efficacy perceptions in accomplishing the tasks, as well as their interest in the tasks, and thus

the self-motivational beliefs may have an impact in increasing their goals in performing the activities (Zimmerman, 2000 b). In this self-reflection phase of the model, students make self-evaluation of their performance and causal attributions for their success and failure in the tasks, by correcting the use of strategies they planned and used respectively in the forethought and the performance phases. Once students make strategy use causal attributions, they may show a more positive self-reaction to the tasks provided, and a more adaptive decision in trying all strategies until success is achieved (Zimmerman, 2000 b).

Consequently, when self-regulated learners perceive strategies as ‘correctable’ factors, therefore, they show more positive self-reactions to the tasks, and hence increase their self-efficacy perceptions as well as interest in tackling the activities. On the contrary, if learners are dissatisfied, their level may decrease as well as their interest and motivation to tackle similar tasks in the future (Zimmerman, 2000 b).

Overall, although several internal and external circumstances influence students’ self-efficacy perceptions in maintaining success, those perceptions are still a good sign of self-regulated and motivational learning. More empirical evidence on self-efficacy and learning performance will be provided within the subsequent sections.

2.5.4 Research on Self-Efficacy and Academic Achievements

A review of 32 articles published between 2003 and 2012 found a positive relationship between self-efficacy and learning outcomes, between self-efficacy and learning strategy use, and strategy-based interventions to improve self-efficacy (Raoufi et al., 2012). In academic contexts, self-efficacy beliefs have been studied in relation to different variables such as anxiety, language performance (reading, listening, speaking, and writing), and strategy use instruction. Self-

efficacious learners trust their competencies, lower their anxiety, monitor and self-regulate their impulses, have the drive to initiate challenging tasks which may positively result in better academic attainments (Komarraju & Nadler, 2013; Raoofi et.al, 2012; Roick & Ringeisen, 2017; Tercanlioglu, 2002). However, although the sense of self-efficacy students possess has an influence on their achievements, it is not the only factor which may increase or decrease their performance (Schunk, 2003).

Empirical evidence on the importance of self-efficacy has been confirmed in a number of studies. For example, Kord and Abdolmanafi-Rokni (2016) carried out a study on the association between self-efficacy, anxiety and speaking performance of 60 intermediate university students in Iran. During the first session of the research project, a speaking test was administered to all participants to measure their ability to speak, then a foreign language anxiety scale with a self-efficacy scale were distributed to learners in the second and the third sessions respectively.

Analysis of the anxiety scale showed that the strongest cause of learners' fear about gaining poor results was that they felt that they were not able and skilful enough in dealing with language tasks in English, in addition to other factors such as fear of negative evaluation and being afraid of making mistakes. Additionally, for the relationship between anxiety and self-efficacy, participants' anxiety and speaking ability were significantly and negatively correlated (Pearson correlation coefficient of $-.333$). That is learners' ability to speak decreased when their anxiety increased.

To examine whether the level of self- efficacy that students have has any effect on their speaking performance, all participants were divided into two groups. As the maximum possible score was 100, those who scored over 40 (35 students) in the self-efficacy scale were considered as high as opposed to those with low scores under 40 (25 participants). Analysis of the data using

Pearson correlation indicated that self-efficacy scores and speaking performance were significantly correlated. This means that the more learners felt that they were self-efficacious, the higher was their ability to speak and undertake speaking activities, and their perseverance and effort expenditure to undertake the activities increased as well and vice versa.

Doğan (2016) conducted a quantitative study which aimed to examine the sense of English self-efficacy, anxiety, and their relationship with gender and parents' demographic background of 150 EFL university students in Turkey. Analysis of Pearson's correlation coefficient showed that students' self-efficacy beliefs and anxiety levels were negatively correlated. That is, learners' self-efficacy was high if their level of anxiety was low and vice versa. Moreover, males and females' levels of self-efficacy and anxiety differed significantly, with males having a higher sense of self-efficacy compared to females, and females having higher levels of anxiety compared to that among males at $p=.03$ in self-efficacy, and $p=.001$ in anxiety. Furthermore, ANOVA results showed that self-efficacy and anxiety levels of students did not differ significantly in relation to their parents' backgrounds.

Regarding the relationship between strategy instruction and self-efficacy, Rahimirad and Zare-ee (2015) conducted a study which aimed to investigate the effect of metacognitive strategy instruction on EFL university learners' self-efficacy in Iran. The whole sample (40 intermediate to upper intermediate students) were divided into a control and an experimental group. The former received usual listening instruction (with no training on the use of listening strategies) as opposed to the experimental group in which metacognitive strategy instruction was introduced to teach listening comprehension for eight sessions. The researcher administered a self-efficacy questionnaire as a pre-test for both groups to measure their self-efficacy beliefs. While results of the independent t-test in the pre-test (self-efficacy questionnaire) showed no statistically differences

between the control and the experimental group, statistically significant differences were found in the mean-scores of the post-test between the two groups after the treatment sessions. That is, the intervention group outperformed their counterparts in the control group in gaining more self-efficacy in listening.

Although the size of this study was rather too small (only 40 students), its findings confirm the significant role of metacognitive listening strategies in enhancing students' self-efficacy beliefs in listening. That is, once learners are exposed to training in the use of strategies, they become familiar with them in the language activities they may encounter, and hence this may help them monitor the tasks and overcome the breakdowns they may face. Thus, their confidence to undertake the activities increases by being able to deal with the language challenges they may face, and thereby their language gains which again contribute to high levels of self-efficacy perceptions. Nevertheless, previous research findings into the correlation between reading comprehension and self-efficacy perceptions have been inconsistent and contradictory. For example, although the studies conducted by Boakye (2015), Fitri E et al. (2019), Ghabdian and Ghafournia (2016), Osman et al. (2016), Salehi and Khalaji (2014), and Shehzad et al. (2019), have identified a positive correlation between reading comprehension and self-efficacy, other studies (Carroll & Fox, 2017; Wilson & Kim, 2016), on the other hand, revealed that reading comprehension performance and self-efficacy were not correlated.

Overall, findings from all the studies mentioned earlier acknowledge the view that learners' academic achievements seem to be affected to a certain extent by their sense of self-efficacy. Participants with high scores in self-efficacy beliefs tend to have lower anxiety, exert more effort, and persist to accomplish certain language activities. Lower levels of language anxiety enable them to make positive judgments of their capabilities in dealing with the language tasks. However,

several limitations of the previous studies need to be acknowledged because they have thrown many questions in need of further investigation. In the studies of Kord and Abdolmanafi-Rokni (2016), and Rahimirad and Zare-ee (2015), the sample sizes were small (60 and 40 students respectively) which may not allow their findings to be generalized. Moreover, the studies are limited by the use of a self-reported data' only through self-efficacy and anxiety scales which may cause problems for the validity of the study. Using self-reported language scales only, the participants may not answer as honestly as they really feel or believe. In order to gain deeper knowledge of learners' proficiency and self-efficacy perceptions, a qualitative research design combined with quantitative methods needs to be implemented. One example of this is interviewing students about their views on language proficiency and sense of self-efficacy improvements after completing language tests, and self-efficacy questionnaires. Furthermore, only students whose proficiency is intermediate to upper intermediate were taken as potential participants in the studies by Kord and Abdolmanafi-Rokni (2016), and Rahimirad and Zare-ee (2015) cited above. More studies are required to illustrate the relationship between self-efficacy and achievement for students from different proficiency levels to depict the real impact of the intervention. Therefore, further research needs to explore the impact of self-efficacy perceptions of a larger population of learners with different language proficiency levels over a longer period of time.

2.5.5 Causal Attributions, Self-Efficacy, and Performance

Attribution theory refers to explanations that individuals attempt to provide for their performance outcome (successes or failures) in certain activities (Weiner, 2000). The process of ascribing causes for success may be helpful in continuing to work to achieving success again, whereas identifying causes of failure works as an indicator to avoid failing again (Mercer et al.,

2012). Attributions or causes of success or failure are classified according to their locus, stability, and controllability (Weiner, 1985, 2000, 2005).

1. Locus: refers to causes of success and failure which are within the individuals themselves (internal factors) or from the outside (external factors). Ability or aptitude, and effort are internal attributions, whereas luck, task difficulty, and assistance from others are external factors (Weiner, 2005).

2. Stability: causes that are static and not subject to change such as aptitude and luck, or causes which are temporary and can be changed (effort, strategies, task difficulty for example) (Weiner, 1985).

3. Controllability: causes that the individual can or cannot control. For example, task difficulty, ability, and luck are not controllable, whereas effort and strategy use can be controlled by the learner (Weiner, 1985).

Whether perceived causes are internal or external, constant or temporary, controllable or uncontrollable, they may influence to a certain extent the expectancy and value learners attach to tasks which may also influence their motivation and achievements (Weiner, 2005). Weiner (2005) referred to expectancy as the anticipation of future success or failure, and value as the emotional consequences of attaining or failing to attain the determined goals depending on the causes. For instance, if learners recognize that the cause is stable and uncontrollable, they anticipate that the same outcome will appear in future activities. Also, if they perceive the cause of their success or failure as internal and controllable, they would feel pride and self-esteem, whereas, if the causes are external, they would feel inferior to others, and blame themselves as not being competent enough to undertake the activities (Schunk et al., 2014).

As individuals' self-efficacy seems to be affected by their future expectations for success or failure and causal attributions, adaptive behaviours are those behaviours that are caused by internal and changeable factors (Hsieh & Schallert, 2008). Maladaptive behaviour on the other hand refers to attributing failure to internal, stable, and uncontrollable causes, whereby failure is inevitable, and success is beyond one's control (Hsieh & Schallert, 2008). Therefore, causal attributions, expectancies, self-efficacy beliefs and achievements are in a reciprocal relationship. When learners have high expectancies, they would work harder and persist longer to work on the tasks, and hence increase their sense of self-efficacy in achieving better results (Schunk et al., 2014).

Within a teaching and learning environment, Weiner (2010) affirms that sources of learners' attributions are related to their past experiences, teachers' feedback, and achievements of their peers. Consequently, the way in which students describe the causes of their achievements or underachievement may have an adaptive or maladaptive impact on how they perceive their abilities in approaching the learning tasks. That is, learners who attribute their failure to maladaptive factors seem to perform more poorly in learning activities, compared to those who refer to a more adaptive attribution (Chodkiewicz & Boyle, 2014; Hsieh & Kang, 2010). Yet, it has been suggested that it is possible to change individuals' maladaptive attributions for failure to more adaptive factors through what is known as 'attribution retraining' (Weiner, 2010).

2.6 Attributional Retraining in Learning

Researchers have attempted to look at ways to modify maladaptive explanations of students which lead them to task failure. One possible way of doing that is to provide them with interventions and treatments that may be helpful in altering their attributions for failure, enhance their task achievements, perceived self-efficacy, and motivation (Chodkiewicz & Boyle, 2014;

Stewart et al., 2011). These interventions usually appear in a form of attributional retraining. Attributional retraining (also referred to as attributional training, attribution training, attribution retraining, and reattribution therapy) is one of those suggested programs. These interventions are thought to ameliorate, and restructure explanations students provide for their failure, and to change maladaptive attributions to more adaptive ones (Stewart et al., 2011). In the classroom, attributions may be altered through teacher's attributional feedback (Schunk, 1985) and collaborative work activities (Poellhuber et al., 2008) which are claimed to sustain learners' motivation, performance and sense of self-efficacy.

2.6.1 Attributional Feedback

Causal attributions in academic contexts refer to explanations learners provide for their successes or failures. Those attributions can be modified and changed through exposure to different interventions that may lead to changes in behaviours through making self-efficacy perceptions stronger (Bandura, 1997). Teacher attributional feedback has commonly been assumed to be the strongest source of modifying learners' attributions for success and failure in the classroom (Schunk et al., 2014). Weiner (2010) claims that ascribing performance outcomes to internal or external, controllable or uncontrollable, stable or changeable factors is based on different circumstances such as learners' past experiences, social modelling, as well as teacher's feedback. The latter has commonly been suggested to influence learners' motivation, and hence their self-perceptions about their capabilities and academic performances (Mercer et al., 2012).

Learners may value the idea that their progress can be judged by people more experienced or competent than they are, and probably they appreciate their teachers' feedback more than any other sources. They consider their teachers as a reliable source of feedback in the classroom because

they are in direct contact with them; they can share with them successful and unsuccessful aspects of their performances (Boud & Molloy, 2013; Nob, 2016). In addition to that, teachers' feedback is also considered of utmost importance since teachers are the expert and represent the role model for students in the classroom, and that their feedback leads them to revise and modify their work by instructing which parts to alter (Ruegg, 2015). Furthermore, Vasu et al. (2016) suggest that learners value their teachers' feedback more than their peers' because they believe that the teachers know best, and that learners prefer to produce something closely related to their ideas.

Overall, within attributional theory, learners' explanations for their successful or unsuccessful achievements are related to the three dimensions of locus (internal or external), controllability, and stability. Ascribing their achievements to internal, controllable and changeable factors may result in high achievements, motivation, and self-efficacy compared to external, uncontrollable and constant factors, which may result in low levels of self-efficacy (Bandura, 1997).

The process of attributing performance is difficult for both teachers and learners. Students may not always be able to give accurate causes for their success or failure; that is, they cannot recognize whether the cause is internal or external, changeable or stable, controllable or uncontrollable. Likewise, teachers may find it difficult to change learners' behaviours by providing feedback on the different factors. One way of overcoming this difficulty might be attributing failures to insufficient effort or inappropriate use of learning strategies which are internal, changeable, and controllable factors, and ascribe success to a constant factor as suggested by Schunk (2003), and Schunk et al. (2014). Feedback can be provided by teachers on the effort learners devote to learning tasks since effort is internal, changeable, and under their control, compared to other external and stable factors such as luck and task difficulty, and hence learners may retain their high sense of perceived self-efficacy (Mercer et al., 2012). Nevertheless, when

students tried harder, but they still experience failure, the teacher may give feedback on other aspects which cause failure such as feedback on strategy use. Through providing feedback on strategy use, learners can have the opportunity to think about their failure outcomes by altering the learning strategies they employ, and hence achieve progress in dealing with similar tasks in the future (Graham, 2011; Graham & Macaro, 2008; Chamot & Harris, 2019; Macaro et al., 2015). Therefore, the role of the teacher is considered to be of paramount importance “in facilitating strategy development through effective modelling, scaffolding and feedback in order to help students to move towards being more strategic and proficient” (Forbes, 2019, p. 461).

2.6.1.1 Empirical Studies on Attributional Feedback. Given the importance of teacher attributional feedback, a number of studies have been carried out aiming at modifying learners’ attributional tendencies, and thus enhancing self-efficacy beliefs, motivation and academic achievements. For example, Schunk (1982) conducted an experimental study to examine the effect of providing effort feedback on achievement outcomes of 40 children (26 males and 14 females), who lacked skill in mathematical subtraction. Participants were divided into four groups: children who received feedback on their past attributions, future attributions, monitoring, and a training group. Those children received treatment on the skill of subtraction using an arithmetic test, and judgment of their self-efficacy beliefs to solve subtraction problems. The past and future achievements groups received effort feedback on their past achievements and future achievements respectively. By contrast, children in the training group were not monitored and did not receive any feedback. The monitoring group also did not receive feedback, but their progress was monitored.

The monitoring of the past attribution group, and the future attribution children took different forms. For example, the teacher monitored the progress of children in the past attribution group by moving around the classroom and asking them what page they were on. After each child

replied, the teacher commented orally 'you have been working hard' to make the participants to link their past achievements with their effort expenditure in accomplishing the activities.

In the future attribution treatment, the teacher gave feedback to emphasize the importance of effort to achieve better results in the future, 'you need to work hard'. Children's progress in the monitoring group was monitored in a similar way to the treatment groups (the teacher walked around the class and asked children what pages they were on), but he did not comment on their responses (no feedback provided). Unlike the three groups (the past attributions, the future attributions, and the monitoring group), the training group were not monitored and did not receive feedback.

There was a teaching material packet containing seven pages; page one was about explanations of the mathematical process, and the other six pages were problems for children to solve. As a post-test, children received an arithmetic test after the third session of treatment, and their self-efficacy was measured before and after this test. In terms of the effect of the training on children's self-efficacy in the subtraction skill, there was a significant increase only in the past attribution condition, compared to the other three groups. Therefore, this study's findings confirm Bandura's (1997) theory of self-efficacy in which past experience in combination with verbal persuasion plays an important role in affecting learners' performance outcomes and self-efficacy perceptions. That is, when the teacher provided feedback on their effort as 'this means you have been working hard', the feedback indicated to children that they have been successful in solving the arithmetic problems, and hence they increased their motivation and sense of self-efficacy.

In another study, Schunk (1983) explored the effect of attributional feedback on effort and ability on the self-efficacy beliefs and academic performance of 40 children who had weak

subtraction skills. As a pre-test, participants (aged between eight years four months to ten years two months) were asked to complete a self-efficacy questionnaire on their ability to solve subtraction problems. After completing the questionnaire, they had a subtraction skill test to measure the number of problems solved correctly. The researcher first asked them how long they would spend in solving each problem. At this stage, no feedback was provided for children. During the training sessions, children were put into four groups: receiving either ability feedback, effort attributional feedback, both ability and effort attributional feedback, or no feedback at all. As a post-test, children received an arithmetic test after the third session of treatment, and their self-efficacy was measured before and after this test.

In terms of participants' self-efficacy beliefs, results indicated a significant main effect of both ability and ability +effort attributional feedback on their success. Besides this, post hoc comparisons indicated that children's sense of self-efficacy was significantly higher in the ability attributional feedback condition than the other groups. Interestingly, there were also differences in judgments of self-efficacy beliefs amongst the three groups (effort feedback, effort+ ability, and no feedback groups). The two feedback groups' self-efficacy was significantly higher than the no feedback group. The same was true for subtraction skills, with both groups' feedback (ability attributional feedback group and ability + effort attributional feedback) outperforming the group with no feedback at $F(1, 39) = 14.61, p < .001$, and $F(1, 39) = 18.33, p < .001$ respectively.

Findings obtained from the study by Schunk (1983) stress the importance of ability feedback more than effort feedback in influencing children's performance and self-efficacy perceptions. On the one hand, children at this age (eight years four months to ten years two months) may prefer to be called smart enough in solving subtraction problems rather than hard workers who have high expenditure of effort. The outcome of this study that ability attributional feedback affected

significantly children's outcomes more than effort feedback did, however, supports other research. For example, Nicholls (1978, 1979) suggested that children at age nine start to perceive ability and effort as being two different aspects that may affect their performance. As opposed to effort attributions, ascribing success to ability as a causal factor becomes more important at this age (by age nine), however, as children become older, there would be an increase in the importance of ability attributions compared to effort attributions which decreases (Nicholls, 1978, 1979).

Schunk (1984) in a similar follow up study examined the impact of effort and ability feedback on participants' perceived self-efficacy. In this study, the researcher used the same methods as in his study in 1983. However, this time, there were four groups of children; one group was exposed to ability feedback, one other group received effort feedback, and the two remaining groups were exposed to both ability and effort feedback. One group of effort-ability feedback received ability feedback first then effort feedback, while the other one received effort then ability feedback.

Findings indicated that children who were exposed to the ability feedback intervention first performed significantly better in the subtraction problems and had a higher sense of self-efficacy than those who received effort feedback at the beginning at $F(2,33) = 7.36, p < .01$. Children emphasized ability as the main factor for their success when they solved subtraction problems correctly, and hence achieved higher scores in the self-efficacy beliefs. This study adds to our understanding about the sequence of attributional feedback provided for children, which had a greater impact on either ability or effort attributions. Providing ability feedback first may convey to children that they are performing well, whereas, children's levels of success may be lower if providing effort feedback first because this may imply that they lack the skill to perform better, so they have to try harder to see what they can achieve.

Overall, the three studies carried out by Schunk on different types of attributional feedback claim the usefulness of feedback on academic achievements. However, the generalisability of these results is subject to certain limitations. For instance, the small sample size (only 40 participants) did not allow reliable data to be generalized to all children who lack subtraction ability and even other mathematical or language skills. More research is required to determine the efficacy of attributional feedback on a larger sample of participants. Further research in this area needs to be done to establish whether attributional feedback may affect adults' performance the same way as children. Furthermore, another limitation of these studies is that they were conducted in a very limited intervention period (three school days for 40 minutes a day). Therefore, it would be interesting to conduct further research over a longer period to assess the long-term effects of feedback on learners' achievements. An issue that was not addressed in these studies is also whether children's self-efficacy and performance were influenced directly by the attributional feedback or mediated by causal attributions such as effort and ability.

In another study on attributional feedback, Graham (2007) conducted a study on the link between a training program on the use of listening strategies and sense of self-efficacy of 16-17-year-old learners. Participants in her study were divided into three groups and exposed to different interventions. There was a comparison group in which learners were not exposed to any training, but rather completed tests only. There were two intervention groups; a high scaffolding group (HS), and a low scaffolding group (LS). Students in the HS group received both learning strategy training and teacher feedback on the use of listening strategies. They were also asked to comment on the strategies they had employed effectively or ineffectively, in addition to their future plans in using those strategies in a strategy use log. Then, the researchers commented and gave feedback to help

students ascribe their outcomes to strategy use attributions. Students in the LS group received only strategy training with no feedback.

As far as listening self-efficacy beliefs are concerned, results showed that the HS group made the greatest gains. The listening achievements tests scores indicated that the HS group showed more improvement from the pre-test to post-test more than the other groups. There was also a significant increase in both HS and LS group students from pre-test to post-test in some aspects of self-efficacy, mainly understanding detail and opinions. Contrary to expectations, this study did not find a significant difference between the HS and LS groups. Although the HS students showed the biggest gains in listening self-efficacy, there was not a significant difference between the HS and the LS groups.

Findings of the quantitative analysis obtained from the questionnaire at post-test revealed that although most students did not think that the training was helpful to any great extent, 47% of students in the HS group rated positively the helpfulness of the training in listening. Besides this, when participants asked about reasons for their perceived lack of success in listening, the most cited reasons were 'low ability' and 'difficult tasks'. It is somewhat surprising that no causal attributions related to inappropriate strategy use were noted, and that their attributions were not modified. So, the aim of the study to help students change their attributions through strategy use training and feedback was not successfully achieved. A possible explanation for this is that the process of trying to change learners' attributions for their performance outcomes may take longer than six or eight months as Graham (2007) suggested. Another possible explanation for this might be that the teacher did not provide sufficient feedback for students on the listening strategies use, and which might help them increase their self-efficacy beliefs and achievements in the listening tasks. That is, pieces of feedback that the HS participants received were not enough to the extent that made them

significantly outperformed the LS group, as not all HS schools submitted their strategy use log for the teacher to comment on them. As Graham (2007) mentioned, there was an imbalance in the amount of work and hence feedback received; some schools received up to seven pieces of feedback, contrary to others who only received two pieces.

Overall, findings from the previous studies (Graham, 2007; Schunk, 1982, 1983, 1984) confirmed the potential effectiveness of strategy use training with feedback on enhancing learners' performance outcomes and self-efficacy perceptions. The teacher may help learners to modify their attributions for success or failure by trying to make them ascribe their performance outcomes to factors that they can have control over, factors that are internal to them and that they can change such as effort and learning strategies. Although attributional feedback is of paramount importance, it should be credible and match learners' perceptions particularly at an early age. In other words, teachers should provide feedback to attribute learners' failure to effort if they are not trying hard and strategy feedback if the outcome may change when applying a different method (Schunk et al., 2014).

Since the present study dealt with reading comprehension performance, it might be useful to provide feedback for students' successes and failures to appropriate or inappropriate strategy use rather than effort or ability. As Graham (2007), and Chamot and Harris (2019) suggested, interventions based on the teacher's feedback or comments on learners' strategy use, by suggesting for example alternative ways when dealing with the reading comprehension tasks, may contribute to their successful strategy use and thus better learning outcomes.

Additionally, participants of the present study are adults who might have control over the effort expenditure necessary for solving learning problems and know how to manage it. Possibly, all

students at this stage of learning (university level) exert more effort to achieve academic success because they may consider effort as one reason that determines their outcomes (achievements or under achievements). Schunk (2003) for instance believes that providing attributional feedback on learners' effort to perform particular tasks seems to be reliable at the early phases of learning, and it is possible that moving to feedback on ability or strategy use is more effective in latter stages of learning.

Another reason for focusing on strategy use attributional feedback rather than ability or effort feedback, is that because the reading comprehension process is more than the ability to decode words in order to understand the meaning of the whole passage. It is also about employing different task strategies to understanding the main topic of the text, making inferences, and understanding opinions. Consequently, it is possible that learners should not attribute their performance outcomes in the reading comprehension process to merely effort or ability, but rather to strategies they apply. Therefore, this research study investigated the impacts of the combination of training on the use of reading comprehension strategies within the collaborative strategic reading approach (CSR) and feedback on students' strategy use and reading comprehension outcomes.

Moreover, as Graham's (2007) study failed to make any observable changes to students' patterns of causal attributions, making it hard to link improved self-efficacy to attribution retraining, one aim of this study is to overcome this problem. By receiving regular feedback on both their strategy use and reading comprehension performance, learners may become aware of the need to link their attributional failure in reading comprehension activities to inappropriate use of reading strategies. Providing feedback that emphasizes the effectiveness of the CSR strategies in gaining better reading comprehension outcomes may lead to modifying students' causal attributions to the use of strategies rather than other factors like effort, ability, or difficulty of the task. Once learners

attribute their performance outcomes to internal, changeable, and controllable factors, their sense of self-efficacy may increase, as well as their attainments.

2.6.2 Collaborative Learning and Self-Efficacy Perceptions

Collaborative learning has also been suggested to function as an attributional therapy to reduce learners' fear of failure and enhance their motivation (Koh, 2008). That is, while learners are provided with an opportunity to work with their peers on learning activities, their anxiety may reduce, their motivation to learn may increase (Suwantarathip & Wichadee, 2010), and hence they put in more effort to contribute to the success of their groups. Additionally, the less skilled learners might benefit from their more skilled learners when interacting with them in small collaborative learning activities, and thus increase their performance and sense of self-efficacy (Margolis & McCabe, 2004).

Although the number of empirical studies that have examined the relationship between peer interaction and self-efficacy is limited, the existing literature shows that there is a positive effect of collaborative learning on enhancing students' self-efficacy perceptions. For example, in their study, Noroozi and Mehrdad (2016) examined the impact of interaction among Iranian EFL students on their self-efficacy beliefs in learning some vocabulary. Two self-efficacy tests were employed as pre-and post-tests for both the experimental and the control group. Both groups were taught the meaning and the context of ten new words for a period of ten sessions. For the experimental group, learners worked in groups in which they were asked to learn some words from the book then teach them to their peers. Results of Analysis of Covariance (ANCOVA) obtained from the self-efficacy questionnaire (with pre-test scores entered as a covariate) showed that compared with the control group, the sense of self-efficacy of the experimental group increased significantly. Thus, from these

findings, a conclusion can be reached about the potential effectiveness of collaboration among learners in language learning. It seems that when learners are exposed to group work activities, their confidence about their capabilities to learn increases. The collaborative learning environment provides them with opportunities to express themselves freely, listen to different views from their peers, and a motivational atmosphere to ask each other questions whenever faced with difficulties.

Schunk et al. (2014) provided more arguments on the vital role of collaboration in enhancing students' self-efficacy. They claimed that learners' self-efficacy within a group increases because they are responsible for their own contribution to the success of the group by tackling some parts of the whole designed task of the group. Being aware of their participation within the group, learners put in effort, persist and overcome all the challenges to prove their capabilities in maintaining success and positive outcomes. Moreover, when learners are engaged in small group activities, their self-efficacy beliefs may increase. Collaboration may help them increase their self-efficacy beliefs, because it affords them an opportunity to observe performances of others, how they manage to practise the activities which may then increase their academic achievements (Law et al., 2015).

2.7 Collaborative Learning, Reading Comprehension Proficiency and Self-Efficacy

Perceptions within an Algerian EFL Context

In different ESL/EFL situations, a significant correlation was detected between strategy instruction, strategy use, reading comprehension performance, and reading self-efficacy perceptions (Ghabdian & Ghafournia, 2016; Magogwe & Oliver, 2007; Tercanlioglu, 2002). For example, on the effectiveness of strategy instruction, Raissi and Roustaei (2013) conducted a quasi-experimental study to investigate the impact of an instructional treatment including reading strategies on

students' self-efficacy and reading comprehension using a test on reading comprehension and a survey to measure the sense of self-efficacy. 60 undergraduate students from Iran university were chosen to take part in their research, and then they were divided into an experimental and a control group. Students (30 participants) in the experimental group were exposed to some training sessions on reading strategies instruction for extensive reading, whilst no such instruction on the use of reading strategies was implemented with the control group. The experimental group were given the self-efficacy questionnaire at the beginning and end of the training to examine any improvement in their reading comprehension ability and self-efficacy beliefs after the treatment. Findings of paired sample t-test revealed that reading comprehension performance and self-efficacy beliefs of the experimental group increased significantly better than the control group after receiving the instruction on the use of reading strategies.

Similarly, strategy use was claimed to be correlated with reading comprehension performance and self-efficacy. This is confirmed in a study conducted by Kargar and Zamanian (2014) on the relationship between reading strategy use, performance, and self-efficacy. Findings of their study using Pearson coefficient correlation showed a significant positive correlation between the use of reading strategies, reading comprehension, and self-efficacy.

Overall, findings of the above studies add to our understanding about the crucial role of providing strategy instruction on the use of reading comprehension strategies in enhancing learners' reading comprehension performance. In other words, once learners are trained on how to process reading texts, they become familiar with the use of strategies and develop their skills in using them, and hence increase their achievements as well as their self-efficacy perceptions in undertaking similar tasks in the future. Therefore, strategy instruction on the use of learning strategies seems to make students more strategic readers, meaning that they become flexible in the use of the strategies

by increasing their awareness on how and when to apply the strategies depending on the tasks provided (Graham, 2007; Macaro & Erler, 2008; Taghinezhad et al., 2015).

Compared to the previous studies conducted within ESL contexts (Iran, Turkey), there seems to be differences within the Algerian ESL context. With the adoption of the LMD system in 2004-2005 to the Algerian educational system, more opportunities are supposed to be given to learners to regulate their own learning by introducing new language teaching methods to the curriculum (Sarnou et al., 2012). However, there exists a misconnection between theory and practice (As discussed in the General Introduction Chapter). That is, the principles of the new educational policy require the use of the CBA approach, which stress the active role of the learner in the classroom, and emphasize communication rather than just learning grammar rules. Nevertheless, there are no real practices that emphasize the active role of learners because of the time and space constraints (Rabhi, 2013) (large number of students: over 40 students in some cases to be taught in 90 minutes).

Baghdadi and Keskes (2014) further confirmed that interaction and collaboration among learners to engage in group work activities are not emphasized in the Algerian EFL classroom. The latter is still characterised by a whole class teacher-centred approach. Teachers prefer to encourage group work projects, student peer assessment and short quizzes to avoid the problem of formative assessment in large classes because the LMD system requires a learner-centred approach and a continuous assessment of learners (Rabhi, 2013). Therefore, collaborative learning may be helpful in creating better conditions for Algerian university students to learn the language as a source of gaining knowledge by assigning them to small group activities (Mami, 2013).

Furthermore, despite the fact that little is known about the level of reading comprehension of students in tertiary education within an Algerian EFL context, available sources of information

suggest that it is unsatisfactory because of several factors. Using semi-structured interviews with students, Bouazid and Le Roux (2014) found that students of English in Algerian universities link their low achievements in comprehending texts to the lack of any instructional interventions that would help them apply reading strategies. The latter seem possibly significant in training them and altering the way they deal with the reading comprehension activities. Besides that, learners stated that they appreciate the importance of implementing a collaborative learning approach as a facilitative factor of their understanding of the reading comprehension tasks. For them, causes of their failure were also related to the lack of support and guidance from their teacher, as well as lack of interaction with their peers which caused them anxiety, demotivation, and no confidence to tackle the reading comprehension tasks (Bouazid & Le Roux, 2014). Once learners are engaged in group work activities, they would exchange ideas with their peers which might increase their motivation and confidence to accomplish different reading comprehension tasks.

Consequently, CSR which combines both explicit instruction on the use of multiple reading strategies and collaborative learning may overcome problems cited by Algerian university students. The reading strategies may guide them in how to undertake different reading comprehension activities, and collaborative learning may raise their motivation and confidence to undertake similar tasks in the future. That is, once students enjoy the reading comprehension activities, this may help them to improve their performance, and hence this improvement may make them enjoy reading more (Malanchini et al., 2017). Moreover, attributing success or failure to factors that students have control over (strategy use for example) may increase their motivation and willingness to learn, and hence their self-efficacy beliefs (Mercer et al., 2012). Therefore, teachers' feedback may also be helpful in helping students overcome the reading difficulties that cause them failure. Accordingly, CSR in combination with attributional feedback on strategy use may be of positive influence in

enhancing Algerian university students' reading comprehension performance and perceived self-efficacy.

2.8 Research Gap

In reviewing the key literature, it has been detected that no published works examined the practice of CSR with adult Algerian EFL learners in a university context, where the CSR approach may present a novel way of learning. By implementing the CSR approach which combines both collaborative work activities and reading strategy instruction, learners would be provided with opportunities to take responsibility for their own learning, and hence become more autonomous learners. Once learners become more autonomous in their own learning, they may enjoy reading more, and thus increase their achievements as well as their sense of self-efficacy. Therefore, the teaching of reading comprehension in Algerian EFL university context would be reconsidered in the curriculum by adopting the CSR approach which gives learners more opportunities to be responsible for their own learning.

Additionally, research on the influence of CSR on motivational variables like self-efficacy seems not to have been studied in most of the studies in both L1 and ESL contexts. There is, therefore, a definite need for a further research on the impact of CSR on both the reading comprehension performance and self-efficacy perceptions of these learners. Hence, this study, to the best of my knowledge, is the first attempt to explore the impact of the CSR approach on Algerian EFL university students' performance in the reading comprehension activities and the self-efficacy beliefs. Similarly, too little attention has been paid to the notion of the teacher's attributional feedback within a CSR setting for Algerian university students' reading comprehension performance and self-efficacy. Therefore, this study makes a major contribution to

research on CSR by demonstrating its potential influences in relation with feedback on EFL university students' reading comprehension and self-efficacy. Accordingly, issues related to self-efficacy and feedback were tackled in the present research study within the EFL Algerian context.

2.9 Research Questions

This research aimed to address the following questions:

1. To what extent does CSR and attributional feedback on strategy use and reading comprehension performance affect students' reading comprehension performance, sense of self-efficacy, and causal attributions?
2. Do students of different proficiency levels benefit differently from the CSR and the attributional feedback intervention with regards to their reading comprehension and self-efficacy?
3. What are the perceptions of Algerian EFL university students of the use of the CSR approach and the attributional feedback in respect of their reading comprehension achievements, self-efficacy perceptions, and causal attributions?

2.10 Chapter Summary

In summary, this chapter presents a discussion of the main themes of the present study. It began by defining the reading comprehension process, the different models of reading comprehension, differences between L1 and L2 reading comprehension. Language learning strategies, strategy instruction, and the CSR approach are also discussed in this chapter. Then, the

self-efficacy construct with attributional feedback, the research gap and the research questions were also highlighted in this chapter.

Taken together, the reviewed key aspects of the present study provide important insights into the association between language learning strategies, CSR, reading comprehension, self-efficacy, and attributional feedback. That is, the use of the CSR approach through strategy-based instruction which emphasizes the coordinated use of language learning strategies, reading strategies, in this case, has been claimed to be effective in enhancing learners' overall self-regulated learning, and hence their performance and sense of self-efficacy. Providing instruction on the use of language learning strategies allows the learners to have control over and monitor their own learning through setting challenging goals and finding the appropriate strategies to accomplish those goals. Once students' ability to have control over their own learning increases, they enhance their self-regulated learning abilities as well as their persistence in performing the tasks, and thus their performance and self-efficacy levels. The latter might also be affected by the teacher's attributional feedback on the use of the different learning strategies, drawing their attention to the link between strategy use and learning outcomes. That is, once learners receive feedback on their use of strategies from the teacher, this denotes to them that strategies are correctable factors, they then show a more positive reactions to the tasks provided by making a more adaptive behaviour, and hence increase their sense of self-efficacy and learning achievements.

CHAPTER THREE. RESEARCH METHODOLOGY

3.1 Introduction

This chapter is an explanation of the methodological procedures and instruments used to answer the research questions in the present research study. Issues related to research design and context, participants and sampling, data collection procedures and tools for the pre-test phase, the intervention and the post-test are considered. Analysis of the pilot study findings, changes to data collection tools and procedures in the main study are also outlined in this chapter. Parts of this chapter are devoted to discussing issues of reliability and validity of the research project, and ethical considerations, as well as the different methods for quantitative and qualitative data analysis.

To obtain the data, different tools including a placement test, a reading comprehension test, questionnaires, an interview, and learning logs are relevant to answer the following research questions:

1. To what extent does CSR and attributional feedback on strategy use and reading comprehension performance affect students' reading comprehension performance, sense of self-efficacy, and causal attributions?
2. Do students of different proficiency levels benefit differently from the CSR and the attributional feedback intervention with regards to their reading comprehension and self-efficacy?
3. What are the perceptions of Algerian EFL university students of the use of the CSR approach and the attributional feedback in respect of their reading comprehension achievements, self-efficacy perceptions, and causal attributions?

3.2 Research Design

In the literature on paradigms of the social science research, the nature of the epistemological, ontological, and methodological assumptions of the quantitative and qualitative approaches has been subject to considerable debate (W. Creswell & D. Creswell, 2018). It was, therefore, necessary to clarify the researcher's epistemological and ontological stance as this can have an impact on the overall selected research methodology and tools.

According to L. Cohen et al. (2018, p. 33):

Ontology refers to “the nature of reality or of a phenomenon.

Epistemology (how we come to know these multiple realities: influenced by communities of practice who define what counts as acceptable ways of knowing, and affecting the relationship between the researcher and the communities who are being researched.

Methodology: (how we research complex, multiple realities): ...and in which mixed methods have a significant role to play.

While qualitative research is based on an interpretive paradigm which “involves subjectivity or examination of how the researcher's own experiences, biases, and assumptions influence the research (Lodico et al., 2006, p.152), the quantitative research approach stems from the positivist worldview where the researcher doesn't interfere with the research contexts and perceive reality as objective (W.J. Creswell, 2014). Accordingly, the argument that different paradigms inform the different research approaches, it is suggested that using a mixed method approach which is based on a pragmatism worldview to develop an understanding of the research problem would be more effective (W.J. Creswell, 2014).

Research approaches that combine both quantitative and qualitative (mixed methods) are suggested to have more benefits than using only one approach, in the sense that they may lead to enhance our knowledge about the phenomenon under study (Johnson et al., 2007; Lodico et al., 2010). W. Creswell (2014) stated that the mixed method approach can be used, “When one type of research (qualitative or quantitative) is not enough to address the research problem or answer the research questions. More data is needed to extend, elaborate on, or explain the first database” (p. 565). Thus, mixed method approach was referred to by W. Creswell and D. Creswell (2018, p. 4) as follows:

Mixed methods research is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs.... The core assumption of this form of inquiry is that the integration of qualitative and quantitative data yields additional insight beyond the information provided by either the quantitative or qualitative data alone.

Adopting a mixed method approach has a number of purposes, as both quantitative and qualitative methodologies would compensate the drawbacks of each other, and hence add strength to the study. Denscombe (2008), and Teddlie and Tashakkori (2009) summarize the benefits of adopting a mixed method research as:

- ✓ A mixed method approach is used to obtain more accurate data
- ✓ It is used to avoid subjectivity that may result from using only single methods
- ✓ To avoid and combine the possible strengths and weaknesses of single methods, and
- ✓ To provide an overall clear picture of the study that gathers data from different sources.

Therefore, drawing upon the present research study aims and questions, a quasi-experimental mixed method approach combining both quantitative and qualitative data collection instruments was adopted. Data were collected using a number of quantitative and qualitative tools. Generally speaking, quantitative approaches collect data which are analysed numerically including questionnaire surveys and language tests. By contrast, qualitative data are collected using a number of methods, which can be analysed and summarized through narrative and verbal means such as interviews, diaries, memos, and observations (Walliman, 2018).

The use of a reading comprehension test, an English reading questionnaire, an evaluation questionnaire of students' perceptions, a semi-structured interview, and students' learning logs would be appropriate to answer the research questions. Thus, the use of a mixed method approach in the present study was related to mainly two reasons. On the one hand, to explore whether the CSR and the attributional feedback interventions would have an impact on Algerian students' reading comprehension performance, self-efficacy perceptions, and causal attributions for successful and unsuccessful achievements in the reading comprehension activities. On the other hand, the qualitative data would also explain more and provide more insights into the effectiveness of the intervention. Hence, the methodological approach taken in this study was a sequential explanatory mixed methods design, in which quantitative data was collected first to develop an overall understanding of the phenomenon under investigation, followed by the qualitative findings, then both sets of data are linked (Ivankova et al., 2006).

3.3. Research Context

The present study was conducted in an Algerian university, in the faculty of literature and foreign languages, department of English language. Access to all Algerian universities, including

the selected university where the present study was conducted, requires that students should have been awarded a secondary school certificate (Baccalaureate), with a minimum average of 10/20.

Like all Algerian universities, the department of English language of the present study adopted the LMD system in 2010, six years after it was first launched within the higher educational system in Algeria. Under the LMD educational system, there are three grades: L (License) in which a bachelor degree is awarded after completing a three year- program of study, M (Master's degree) granted once completing a two -year program, and finally D (Doctorate) which is normally awarded after between three and four years of research (Rezig, 2011). All students within this department are full time.

3.4 Participants and Sampling

The main study was conducted at the same university where the researcher herself was a student for five years. Participants of the present study were taken from a population of second year EFL learners including both males and females, faculty of literature and foreign languages, department of English. Second year students were chosen for the study because: 1 reading comprehension performance in English is necessary for their academic achievements. 2 Students need to access different materials (articles, books) to enlighten their knowledge about their own field of study. 3 During their second year, students need to access academic language in English, necessary for their Bachelor dissertation or research proposals' writing in their final year (year three).

There were seven groups of second year students within the English department where the study was conducted, with an overall number of approximately 350 students. However, the researcher was not able to randomly select the sample. It was first planned to select participants

from the whole population using a language proficiency test for randomised stratified assignment to the three groups of the main study (a Control group and two Intervention groups). However, the head of the department directly gave the researcher three groups who did not have a teacher for one of their term modules (oral expression). The researcher then was obliged to take the three groups and teach them in their intact classes. The three groups were then randomly assigned to Control group (34 student), and two Intervention groups with 35 students within each group. They were all taught by the researcher herself. One experimental group was referred to as the CSR Plus group and received training on the use of the CSR strategies, and feedback on their strategy use and their reading comprehension performance. Another experimental group, called the CSR group, was exposed only to the CSR training.

As random stratified assignment based on proficiency was not possible, a placement test was used to assign students within groups to two different proficiency levels, high and low achieving students. That is, at the very beginning and before the initiation of the main project, the three groups from the population of second year took a standardized written placement test. The aim of using this test was twofold: 1 to understand the proficiency English level of the participants. 2 Scores of the test were also used to compare the effect of the intervention between the high and the low attaining learners.

3.5 Data Collection Procedures

This section provides a description of the different procedures followed by the researcher to obtain the data necessary to answer the research questions. This study was conducted in the form of a pre-test, a post-test and an intervention and lasted for ten weeks. A timeline scale for the procedures of the data collection is highlighted in Table 3.1 below.

Table 3.1

Data Collection Timescale and Procedures with the Control, the CSR, and the CSR Plus Groups

Data collection timescale	Data collection procedures
Week 1 25/02/2018	Pre-test tools for the three groups
Week 2 04/03/2018	<p>Introduction of the CSR with the Intervention groups+ illustration of each strategy cluster using a text entitled ‘First born, middle, or last born?’</p> <p>Using the same text ‘First born, middle, or last born?’ with the Control group to answer some reading comprehension questions</p>
Week 3 11/03/2018	<p>Review of the CSR strategies+ practicing the strategies using the text ‘Differing conceptions of time’</p> <p>Introduction of the learners’ roles cards</p> <p>Answering the reading comprehension questions of the same text with the Control group</p>
Week 4 18/03/2018	<p>CSR practice using the text ‘Do people like their first names? Most do-or eventually will’</p> <p>Submitting the first learning logs of the CSR Plus group</p> <p>The same text provided to the Control group</p>
Week 5 08/04/2018	<p>CSR practice using the text ‘Women playing games’</p> <p>The same text provided to the Control group</p>
Week 6 15/04/2018	<p>CSR practice using ‘Cell phone yakkers need manners’</p> <p>Submitting the first learning logs of the CSR Plus group</p>

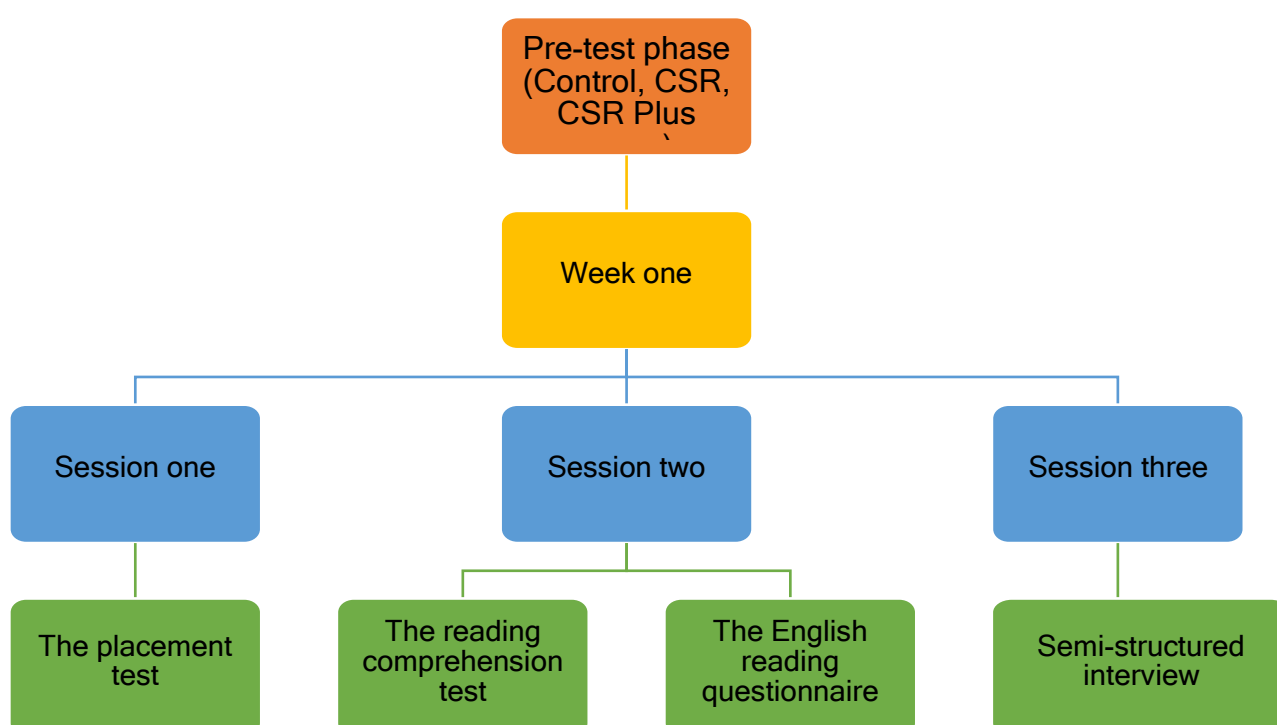
	The same text provided to the Control group
Week 7 22/04/2018	CSR practice using the text ' A surge in cosmetic surgery ' The same text provided to the Control group
Week 8 29/04/2018	CSR practice using the text ' Can't take a joke ' Submitting the second learning logs of the CSR Plus group The same text provided to the Control group
Week 9 06/05/2018	CSR practice using the text ' Do animals lie ' The same text provided to the Control group
Week 10 13/05/2018	Post-test tools with the Control, the CSR and the CSR Plus group

First, the pre-test phase was implemented through a placement test, a reading comprehension test, an English reading questionnaire, and a semi-structured interview in the first week of the project (See Figure 3.1). In the first session, the 60-minute placement test was administered to the participants across the Control and the Intervention groups with the aim of gaining information about their overall proficiency in English. A 90-minute reading comprehension test was administered to students in the three groups in the second session of the first week. The aim of this test was to measure the participants' level of reading comprehension performance. One noticeable thing was that the participants did not take the whole 90 minutes to complete the test, therefore they were also given the English reading questionnaire to complete in the same session. The questionnaire was used to investigate the participants' sense of self-efficacy and causal attributions for success and failure in the reading comprehension activities. In the third session, a

semi-structured interview was conducted with three students each from the Control and the Intervention groups. The aim of this interview was to gain insights that might help to explain data gathered from the English reading questionnaire and the participants' performance in the reading comprehension test.

Figure 3.1

Pre-test Data Collection Procedures

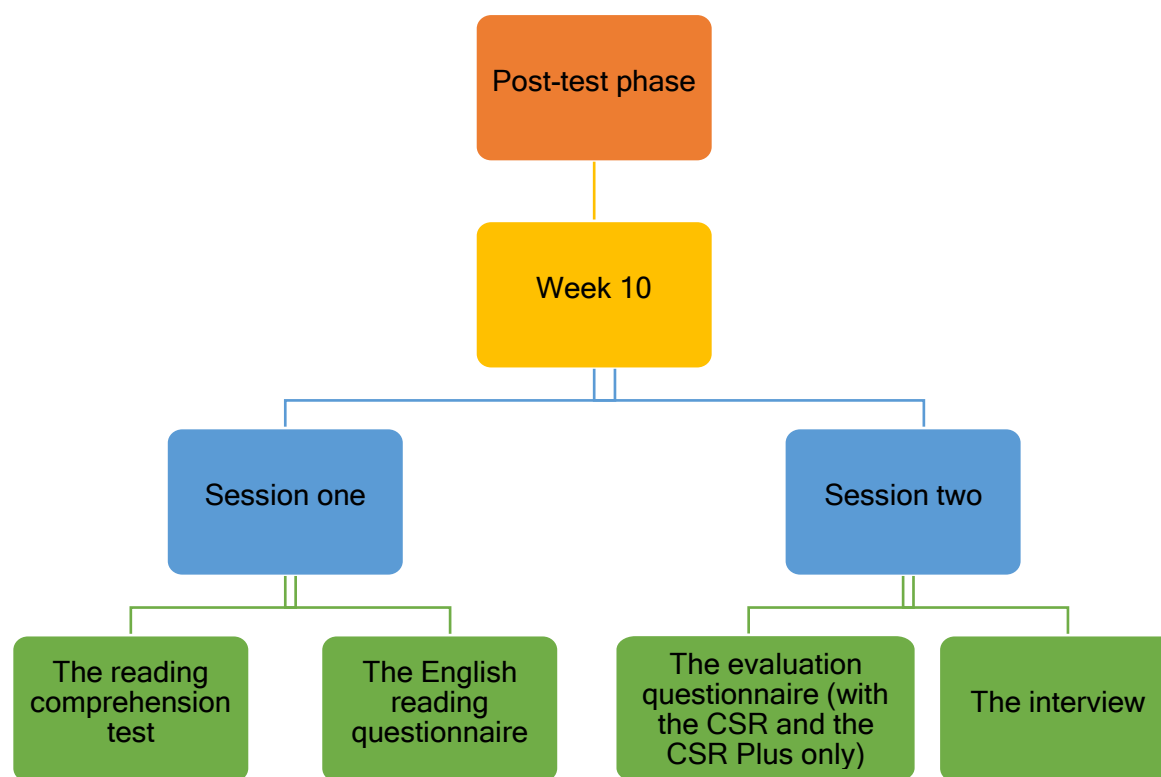


The intervention took place between the pre-test and the post-test, over eight weeks. The CSR and the CSR Plus group received treatment on the CSR, whereas the Control group did not receive any particular treatment, just normal classroom teaching (See Section 3.6.3.2). The CSR Plus group received an additional treatment in the form of attributional feedback from the teacher. Each of the treatment groups received the intervention once a week for 90 minutes, from week two to week nine.

Participants in the Intervention groups were explicitly instructed about the use of the CSR strategies and practised the strategies using different reading comprehension passages. By contrast, the Control group received only the same reading comprehension tasks used with the Intervention groups and answered them in a whole classroom environment. More details about the different procedures of the intervention implemented with the Control and the Intervention groups are provided in Section 3.6.3.

Figure 3.2

Post-test Data Collection Procedures



The final phase, the post-test, took place in the last week of the project (week ten) as illustrated in Figure 3.2 above. The same tools were used to collect data from participants as at pre-test, with some minor modifications, to allow the researcher to assess and examine the effectiveness

of the intervention for the Control and the Intervention groups. The same procedures were followed during this phase as at pre-test, except for an additional tool, an evaluation questionnaire administered to the two Intervention groups to explore their perceptions of the intervention. This questionnaire was used to ask the CSR and the CSR Plus group about their perceptions of the intervention they received. However, as opposed to the pre-test which took three sessions, this post-test was carried out in two sessions only. Furthermore, the placement test was only used at pre-test, but not at post-test. The next part of this chapter moves on to describe in greater detail the different data collections tools, teaching procedures and teaching materials implemented in the present study.

3.6 Data Collection Tools for the Pre-test and the Post-test

A pre-post-test design and an intervention was used within the quasi-experimental approach of the present study. To examine the impacts of the intervention on participants' reading comprehension performance, self-efficacy perceptions, and causal attributions, different research instruments were employed. Therefore, the research data in this study was collected using both qualitative and quantitative methods and drawn from six main sources: a placement test, a reading comprehension test, an English reading questionnaire, a semi-structured interview, learning logs, and an evaluation questionnaire of students' perceptions of the intervention. These tools were used to measure the effectiveness of the instruction from the pre-test to the post-test phases implemented in this study. All tools themselves are given in the Appendices (A to K).

3.6.1 Quantitative Data Collection Tools

3.6.1.1 Placement Test (Appendix A). Research question two aimed to explore whether the impact of the intervention was similar across the different proficiency level, and therefore a placement test was used with all three groups to ascertain proficiency level. That is, at the very

beginning of the research project, all 104 participants took a written placement test to measure their overall proficiency in English. After completing the test, participants were divided into two proficiency levels, high and low levels.

Regarding the characteristics of the placement test used in the present study, it was derived from 'Solutions Third Edition Placement test. Oxford University Press'. There were 64 questions, which aimed to check students' grammatical knowledge, reading and writing ability, and their range of vocabulary. After piloting the placement test, many changes were applied to the main study (more details in Section 3.7.2.1). The main change was that the length of the test was reduced from 70 questions to only 64 questions as the test was perceived as long by participants in the pilot study. Examples of questions in the placement test included the following (Figure 3.3):

Figure 3.3*A Sample of the Placement Test Questions*

1. Grammar: Circle the correct answer

1.1you interested in sport?
 A: Be B: Am C: Is D: Are

1.2 There..... a lot of people outside the school. What's the problem?
 A: are B: is C: be D: am

2. Vocabulary: Circle the correct answer

2.1. My is a writer and his books are very popular?
 A: Aunt B: Uncle C: Sister D: Mother

2.2 Tom got themarks in the class for his homework.
 A: worse B: worst C: baddest D: most bad

3. Reading: Read the text

3.1 When was the first female referee in the UK appointed?
 A: 1969 B: 1976 C: 1999

3.2 Are the sentences true (T) or false (F)?
 A: The article is from a magazine...
 B: The writer says that women are better referees than men....
 C: Pat Dunn is still alive today...
 D: Pat didn't get her referee certificate immediately...

4. Writing

Imagine you went to your capital city on a day trip. Write an e-mail to your friend telling him/her about the day. Include information about the journey there, the people you went with, what you did and what you bought.

3.6.1.2 Reading Comprehension Test (Appendix B). To investigate the impact of the intervention on students' reading comprehension, a reading comprehension test was used at pre-test and post-test. It was a standardized multiple-choice question test in which students selected one appropriate answer which demonstrated their understanding of the passages provided.

The reading comprehension test was adopted from the standardized test of English as a Foreign Language (TOEFL), for a number of reasons. First, the TOEFL test is a collection of academic activities that are constructed for non- native learners of English as a foreign language (Sawaki et al., 2009) and was therefore considered suitable for students in this study. The chosen test consisted of four passages with 40 multiple choice questions that might call upon the CSR strategies such as distinguishing the unnecessary details from the important ideas in the passage, making inferences, and identifying the 'click 'and the 'clunk' (See Section 3.6.3.1) when looking for synonyms and antonyms for example.

Moreover, this reading comprehension test was also chosen in the present study because the language used was simple and likely to be familiar to students. The questions provided in all sections with key information explicitly stated in the passages. The chosen TOEFL reading comprehension test was piloted before the initiation of the main study and changes were made to make it clearer and less difficult for the participants (See Section 3.7.2.3). The same reading comprehension test was implemented at both pre-test and post-test phases of the study. As the tests were administered ten weeks apart, a practice effect was thought to be unlikely. Furthermore, the researcher did not inform the participants that the same test would be used again and its content and answers were not shared with students in the intervening time.

3.6.1.3 Questionnaires. As a large amount of data can be gathered from a number of individuals in a limited time with the use of questionnaires, researchers in second language refer to them as one of the most useful data collection tools (Dörnyei & Taguchi, 2010). Questionnaires refer to “Any written instruments that present respondents with a series of questions or statements to which they have to react either by writing out their answer or selecting from among existing answers” (J.D. Brown, 2000, p. 6).

One objective of this study was to investigate the effectiveness of the intervention (CSR and attribution feedback) on Algerian EFL students’ reading comprehension performance and self-efficacy perceptions, and success and failure attributions. This can be done through experimental interventions, as well as other methods which may complete and confirm the empirical data. Administering questionnaires to the respondents may provide more insights into the feasibility of the training program. Students’ beliefs about their sense of self-efficacy before and after the intervention, perceived causes of their success and lack of success in reading comprehension tasks, and their evaluation of the intervention can all be explored by using questionnaires. Therefore, the purpose of questionnaires in the present study was to offer some important insights into the nature of the effectiveness of the project on self-efficacy beliefs, reading comprehension ability, and students’ attribution tendencies at the pre-test and post-test. Two questionnaires were used in the present study to collect the data; an English reading questionnaire used at both pre- and post-test, and an evaluation questionnaire of students’ perception of the intervention used at the post-test only.

Both questionnaires administered to the participants in the three groups were in English as the students’ language of instruction in the classroom, but not Arabic. The English language used was kept simple and easy to follow so that participants could understand their content, and that the

questionnaires would really measure what they were supposed to measure. That is, using the English language to collect data on students' views and experiences in dealing with the language tasks designed in English, their focus and interest in expressing what they really felt would be taken seriously, as they had the chance to ask for clarification from the researcher because she was present when students were completing the questionnaires. Furthermore, the sole emphasis on administering the questionnaires in English might be beneficial as the main study was conducted in English, and that translations of what the researcher meant by each item in the instruments might not be always accurate. Accordingly, gathering data in students' first language and reporting its findings in another language may risk the validity of the whole research, mainly with tools like questionnaires in which participants were asked only to circle a number in statements to express their views. Further discussion on the use of the two questionnaires in the present study are provided in the following sections.

3.6.1.3.1 The English Reading Questionnaire (Appendix C and H). The English reading questionnaire used in the present study consisted of four sections and was used at pre-test and post-test with participants from the three groups. The overall questionnaire was piloted (See Section 3.7.2.2) to modify, revise, and improve its clarity to the participants. The first section of the English reading questionnaire was about students' overall self-efficacy perceptions in the reading comprehension activities. Students were asked to rate how confident they were that they could perform well the reading comprehension activities by recording a number from 0 to 100 (0 cannot do at all, 100 highly certain can do). The questions were related to learners' abilities in reading comprehension within a CSR approach, which emphasized both collaborative work and reading strategies, persistence to undertake the activities. Therefore, the main aim of this part of the questionnaire was to enable the participants to reflect on their reading self-efficacy before and after

the intervention. Moreover, the use of this questionnaire at both pre-test and post-test aimed to evaluate the effectiveness of the intervention.

Examples of questions used in this questionnaire about students' reading self-efficacy included:

Figure 3.4

An Example of Students' Reading Self-Efficacy Question Used in the English Reading Questionnaire

Please choose the appropriate number that indicates how sure you are than you could perform the following English reading comprehension activities:					
I can predict what the passage is about					
1	2	3	4	5	6
Not sure at all					completely sure

The second and the third parts of the English reading questionnaire (adopted from Graham, 2004, p. 190) also sought to assess how Algerian EFL university students explained their success and lack of success in the reading comprehension activities before and after the intervention. As previous research on causal attribution has established that there exist three dimensions of attributions on the basis of locus, controllability, and changeability (Weiner, 2005), the design of the scale was built on these dimensions. Therefore, the questionnaire included questions related to the attributional factors of effort, strategy use, ability, luck, motivation, and task difficulty. In both

part 2 and 3, students were asked in an open-ended question to think of any other reasons for their successful and unsuccessful achievements in the reading comprehension activities. The last part of the questionnaire was about students' general personal information (gender). One example of attribution questions for failure and success is as follows:

Figure 3.5

An Example of Students' Question about their Success and Failure Attributions

Think about the occasions when you have been **less successful** with reading comprehension activities. Why have you been **less successful**, do you think? Circle the one number from 1 to 6 which best matches how you feel about each reason below.

I have been less successful with reading comprehension activities because

1. I do not try very hard

1 2 3 4 5 6

Strongly disagree

Strongly agree

Now think about the occasions when you have been **more successful** with reading comprehension activities. Why have you been **more successful**, do you think? Circle the one number from 1 to 6 which best matches how you feel about each reason below.

I have been more successful with reading comprehension activities because

1. I try very hard

1 2 3 4 5 6

Strongly disagree

Strongly agree

3.6.1.3.2 The Evaluation Questionnaire of Students' Perceptions of the Intervention

(Appendix J and K). A questionnaire designed by the researcher was administered to students in the experimental groups only at post-test in order to explore their attitudes towards the perceived effectiveness of the intervention (both CSR training and attributional feedback conditions). That is, the use of the questionnaire at the post-test sought to gain insights into whether students felt the training was beneficial and effective in improving their reading comprehension proficiency, self-efficacy beliefs, and attributions for success and failure. The problems and difficulties participants faced while being exposed to the training program were also covered in this questionnaire.

Participants' perceptions of the training sessions were explored through 6 point-scale items in the questionnaire (from 1 strongly agree to 6 strongly disagree) which asked them about the extent to which they agreed on positive statements about the effectiveness of the instruction. Participants were also asked some negatively worded questions about the intervention. These negative statements were reverse coded when entered into SPSS (from 1 strongly disagree to 6 strongly agree).

The questionnaire administered to the CSR group contained 19 questions which asked students about their perceptions of the CSR intervention, in three sections. The first section was about students' general perceptions of the CSR intervention including both positive and negative statements. In the second section, there was an open-ended question used to probe the biggest difficulty faced by the participants when they were exposed to the instruction. Personal information was covered in the last section of the questionnaire.

The CSR Plus group questionnaire was the same as that for the CSR group except it also included a set of items asking about attributional feedback, and it comprised 32 questions. Table

3.2 below summarizes the different sections of the evaluation questionnaire of students' perceptions used with both the CSR and the CSR Plus group.

Table 3.2

Evaluation Questionnaire Sections Used with the CSR and the CSR Plus Group

Questionnaire statements	CSR group	CSR Plus group
General perceptions of CSR	✓	✓
Difficulties faced when receiving the instruction	✓	✓
Perceptions of the attributional feedback linking performance and strategy use		✓
Personal information	✓	✓

The two questionnaires were piloted, and changes applied to the version used in the main study as discussed in section 3.7.2.2. Even with piloting, however, it must still be acknowledged that data gathered from the questionnaires are not always totally valid and reliable as the respondents may attempt to give biased answers that represent a 'social desirability' (Dörnyei & Taguchi, 2010). Consequently, more data were needed to confirm and back up those collected from the questionnaire to add more strength to the study. Therefore, additional qualitative data collection tools were used.

3.6.2 Qualitative Data Collection Tools

In the area of social sciences research, researchers attempt to differentiate the qualitative from the quantitative approach. For example,

While traditional, quantitative methods generate data through the use of instruments such as questionnaires, checklists, scales, tests, and other measuring devices, the principal data for qualitative researchers are gathered directly by the researchers themselves. These data usually include field notes from participant observation, notes from or transcriptions of interviews with informants, and unobtrusive data such as artifacts from the research site or records related to the social phenomena under investigation (Hatch, 2002, p. 7).

That is, different methods are used within the qualitative research design to collect data for a problem under investigation. Therefore, for the purpose of the present study, qualitative data were generated using two main sources, a semi-structured interview and students' learning logs. A discussion of the use of these tools follows in the subsequent sections.

3.6.2.1 Semi-Structured Interview (Appendix D and I). Interviewing is one of the types of qualitative research instruments used to collect data about a given topic. It is described as:

A powerful way to gain insight into educational and other important social issues through understanding the experience of the individuals whose lives reflect those issues. As a method of inquiry, interviewing is most consistent with people's ability to make meaning through language (Irving, 2019, p. 13).

Interviews as a qualitative data collection tool are claimed to be an effective method in obtaining in-depth information about the respondents (Seliger & Shohamy, 1989). For the purpose of the present study, a semi -structured interview with pre-planned questions that needed

elaboration were used at pre- and post-test (See Appendix D and I respectively). This type of interviews is characterized by the fact that the researcher can be flexible in using it by preparing a set of guided questions which can be expanded upon to explore a given phenomenon, yet, not necessarily following a particular order (Merriam, 2014).

Using the semi-structured interview in the present study, the researcher intended to try to explain the data gathered from the quantitative tools about students' reading comprehension performance, self-efficacy perceptions, and attributions for their successful and unsuccessful achievements in the reading comprehension activities. Furthermore, interviews from pre-test and post-test were compared to explore any changes in students' responses after they were exposed to the training sessions for eight weeks. That is, the use of the pre-and the post-test interview aimed to explore students' experiences in learning and reading in English, their reading habits to deal with reading comprehension activities, and the difficulties they faced when undertaking reading comprehension tasks. In addition to that, data gathered from the interview would also add an understanding of the participants' responses provided in the questionnaires.

Some questions in the pre-test and post-test interview were also found in the questionnaire. For example, in both the interview and the questionnaire, there were statements which asked the students about explanations they gave for their high or low performance in reading comprehension activities, the different strategies they used to overcome the reading comprehension breakdowns they came across. Furthermore, the participants were also asked about their attitudes towards the intervention in the post-test interview, and the difficulties they faced when receiving the intervention. Changes were applied to the semi-structured interview after the pilot study. Details of the changes are outlined in section 3.7.2.4

At pre-test, nine students (three students from each of the Control and the Intervention groups) were selected to take part in the interview. After being exposed to the intervention, the same nine students were invited again to take part in the post-test interview. Criteria for selecting the interviewees were based on their reading comprehension and self-efficacy scores at pre-test (Table 3.3). That is, when the researcher scored the reading comprehension test and the self-efficacy perceptions scale, there were participants across the three groups who were found to score either high or low in both reading comprehension and self-efficacy. Some other participants got higher scores in the reading comprehension test, with low self-efficacy perceptions. Accordingly, participants with these profiles were invited to take part in the interview, giving one student high on both measures, one low on both measures, and one with a mixed profile for each group. The same nine students were interviewed again at post-test. Students who scored less than 10 out of 40 in the reading comprehension test were considered as low achieving students, whereas those with scores above 35 were referred to as high attainers. For the self-efficacy perceptions scores, those with mean scores above 80% were perceived to have a high level of self-efficacy, compared to their counterparts with low scores under 20%. Those scores for both reading comprehension and self-efficacy were selected because only a considerable number of students were found to range between those scores.

Table 3.3

Criteria for Selecting the Interviewees Based on their Scores in Reading Comprehension and Self-Efficacy Scale

Group	Reading comprehension score		Self-efficacy scores	
	High	Low	High	Low
Interviewee one				
Interviewee two				
Interviewee three				

The three participants from each group who agreed to participate in the semi-structured interview were asked whether they preferred to be interviewed in English as the main language for classroom teaching and learning, or Arabic as a mother language. Some students preferred to have it in English, others in Arabic, and one student from the Control group preferred to switch between the three languages, however, with a minimal use of French. The reason behind giving the participants the choice of the language they wanted to be interviewed in was so that they would feel at ease when expressing their thoughts and ideas, which was of importance for the researcher. The interview lasted between 20 to 30 minutes with each interviewee.

Questions used with the Control group participants and the CSR and the CSR Plus students were the same at pre-test. However, the nature of questions slightly differed across the three groups at post-test. That is, while questions used with the Control group did not differ from those used at pre-test, some additional new questions were used with the Intervention groups. As an illustration,

because the CSR and the CSR Plus groups received different interventions, the questions at post-test asked them about their perceptions of those interventions only at post-test.

3.6.2.2 CSR Learning Logs. Part of the aim of the present study was to investigate the impact of the attributional feedback implemented with the CSR Plus group on their reading comprehension performance, self-efficacy perceptions, and their causal attributions for reading. Therefore, the CSR Plus students were asked to submit learning logs to the teacher to provide:

1. Their reflections on which CSR strategies they used successfully or unsuccessfully.
2. How far they felt the strategies were helpful
3. How they intended to improve their use of the CSR strategies in the future.
4. Their attitudes towards the teacher's feedback on their reading comprehension performance and CSR strategy use.

The use of such learning logs was piloted before the main study as shown in section 3.7.2.6. More details on the implementation of this tool with the CSR Plus group are provided in the intervention section (See Section 3.6.3.3).

3.6.3 The Intervention

The whole sample of 104 students was divided into three groups and all groups were instructed by the same teacher (the researcher herself). Different teaching procedures were implemented with the Control, the CSR, and the CSR Plus group as shown in Table 3.4 below.

Table 3.4

Teaching Approaches Implemented with the Control, the CSR, and the CSR Plus Groups

Group	Number of participants	Intervention
Control	34 (4 males and 30 females)	Whole class reading comprehension activities
CSR	35 (2 males and 33 females)	CSR approach only
CSR Plus	35 (5 males and 30 females)	CSR approach +teacher's attributional feedback

The Control group in this study was not exposed to either CSR intervention (no group work, and no reading comprehension instruction) or the attribution feedback. The reading instruction for students in this group was based on only answering reading comprehension questions using the same reading materials as the Intervention groups. Compared to the Control group who had only reading comprehension activities for 90 minutes, participants in the CSR Plus group received training sessions in both CSR and attributional feedback for 90 minutes a day for around eight weeks with one session a week. The CSR group received only CSR instruction over the same period of time and number of sessions.

3.6.3.1 Teaching Procedures and Materials Used in the Intervention Phase with the CSR and the CSR Plus Groups. After collecting preliminary data from the three groups at pre-test in the first week of the project, the researcher started implementing the teaching sessions with the three groups beginning from week 2 of the whole project.

First Week of the CSR Intervention. During the first week of the intervention, the researcher explicitly introduced the CSR approach to both the CSR and the CSR Plus group as a

whole class using CSR cue sheets (prompt sheets). The purpose of this technique was to make the learners aware of this approach, and to know when, how, and why to use each of the reading comprehension strategies (previewing, getting the gist, click and clunk, and wrap up) (Figure 3.6). For example, in the previewing phase (before reading), students were trained to look at headings and pictures in the passage to brainstorm and generate ideas about what they already knew about the topic, and to make predictions about what might appear in the passage.

Figure 3.6

CSR Implementation Prompt Sheet Used with the CSR and the CSR Plus Groups (Adapted from Klinger and Vaughn, 1998)

Before Reading	During Reading	After Reading
Preview	Read	Wrap up
<p>Brainstorm: Before reading the entire passage, recalling background knowledge about the topic is useful through looking at the titles, headings, bolded words.</p> <p>Predict: After recalling what you already know about the topic, you will be able to predict what you will learn from the passage.</p>	<p>Click and Clunk: While reading, you may encounter words that you already know (clicks) and which make sense to the understanding of the passage. You may be also faced with difficult words(clunks) which create obstacles in understanding. To overcome the clunks, you may use some fix up strategies such as: Breaking down the word into smaller parts/ Look for prefixs and suffixs/ Reread the part which has the clunk without that clunk/ Finding clues that help you to understand the clunk by reading what comes before</p>	<p>Question Generation</p> <p>After reading the whole text, you may generate important questions related to the topic of the passage to show your understanding.</p> <p>Summary Writing</p> <p>You may also produce a piece of summary writing of the most important ideas stated in the passage.</p>

and after.

Get the Gist: Also, during reading, to show your understanding of the topic, you should report in your own terms the main idea of the passage by excluding the unnecessary details such as examples and keeping the most important ideas only.

To start with, the teacher explained in L2 the four clusters of strategies as a whole to the participants, with pauses to ask if students were clear about them. She provided further explanations when students did not understand any piece of information presented. The next step was that the teacher presented each phase separately with opportunities for students to practise them using a short reading comprehension passage as illustrated below.

The Pre-reading Phase

1. The teacher provided printed copies of a reading comprehension text which contained the title of the text, some pictures, and some words written in bold. The text was entitled: ‘First born, middle, or last-born?’ (Appendix G).

2. Initially, the first strategy cluster, the previewing strategy, was presented to the participants as a whole class. At this stage, the teacher trained the students in the Intervention groups to brainstorm and predict ideas about the text using the previewing strategies of consulting the pre-reading comprehension questions, the pictures and the bolded words in the passage.

3. The teachers gave an example of a brainstormed and predicted idea about the text to help the participants to think of their own ideas. The teacher stressed that the predicted ideas would not be always accurate in order to motivate the students and reduce their anxiety about generating their

own ideas. That is, the teacher did not emphasize that students needed to check whether the predicted ideas were correct or not.

4. Students were given some time to think about their own ideas.
5. The teacher invited anyone who liked to share their ideas with the class.

The during reading phase

Click and clunk:

1. In the same session of the intervention and using the same text as with the previewing strategies, students were trained on the use of the click and clunk and get the gist strategies.
2. The teacher then asked students to identify the “clunks” (or those vocabulary items that were difficult or unfamiliar for them), which may prevent them from understanding those parts of the text.
3. They were encouraged to say what the clunks were and how they could look for their meaning.
4. The teacher provided them with the different ways they could use to fix, or find out, the meaning of the difficult words using the fixing up the clunks prompt sheets (Appendix E).
5. Students were asked to identify any vocabulary items that were difficult for them and to try to understand them using the different ways presented in the prompt sheets.

Get the gist

1. The second strategy cluster used during reading was getting the gist. In this phase, students were trained on how to identify the main idea discussed in each part of the passage using the same text on ‘First born, middle, or last-born?’

2. The teacher read the first paragraph and gave all the possible main ideas.

3. Reading the next paragraph, students were required to identify the main idea by focusing on the necessary information and excluding the unnecessary details.

After reading phase

Question generation:

1. The teacher generated two main questions about the content of the passage.

2. Students were required to formulate different questions about the main ideas discussed in the text to check their understanding.

Summary writing:

1. The teacher summarized the main points discussed in the text in a few words.

2. After listening to the teacher's short summary of the passage, students were asked to say in their own words what they had learnt from the passage.

3. The teacher then invited anyone who would like to read out loud their summary of the text to the class.

Second Week of the Intervention. In the second week of the training sessions, the researcher reviewed the CSR strategies, and asked students to summarize the approach to make sure that they understood it in the beginning of the session. Once the teacher had made sure that students had become familiar with the different strategies, they were given an opportunity to practise them within a teamwork (five members). The division of the groups was based on their scores in the placement test administered to them in the beginning of the project. That is, students who scored above 55/64 were referred to as high achievers, whereas the low achievers were those with scores

under 30/64. Again, those scores were chosen as boundaries because students' scores ranged between under 30 and above 55. There were seven groups in total (See Table 3.5).

Table 3.5

Heterogeneous and Homogeneous Groups of the Intervention Participants

CSR group	CSR Plus group
Group 1: Five high proficiency	Group 1: Five high proficiency
Group 2: Five high proficiency	Group 2: Five high proficiency
Group 3: Three high proficiency and two low proficiency	Group 3: Two high proficiency and three low proficiency
Group 4: Three high proficiency and two low	Group 4: Two high proficiency and three low proficiency
Group 5: Four high proficiency and one low proficiency	Group 5: Two high proficiency and three low proficiency
Group 6: Five low proficiency	Group 6: Five low proficiency students
Group 7: Five low proficiency	Group 7: Five low proficiency students

In this session, students were provided with a different reading comprehension passage from that of the first session to practise more the CSR strategies. The text used was entitled, 'Differing conceptions of time', taken from McGillivray and Peters (2009). In practising the strategies in groups, each member within the group was given a particular role to perform to ensure that all members took part in solving the reading comprehension tasks. Klinger and Vaughn (1998) suggest the group roles as 'leader, clunk expert, gist expert, encourager, and reporter'. Students were

provided with CSR roles cue cards (Appendix F) that illustrated the different steps and responsibilities each one should take as suggested by Klinger and Vaughn (1998). Students were required to rotate roles in each session within their assigned groups. This was scaffolded by the teacher who helped them in trying all the roles within their groups during the session.

Students were working in their small groups with guidance from the teacher when needed and were asked to assist one another in applying the four clusters to carry out the reading comprehension activities. They were encouraged to use the CSR logs (both the fixing up clunks logs, Appendix E, as well as the CSR cue sheets, Figure 3.7) to record and report each step or strategy they used within each strategy cluster, instead of delivering them orally as in the first week. As Klinger and Vaughn (1999, p. 744) explain, “CSR learning logs enable students to keep track of learning in English or another language... [They] can be used for recording ideas while applying every strategy or only used for some of the strategies”. The role of the teacher was scaffolding and moving from one group to another and providing feedback, guidance and assistance if needed.

Figure 3.7

CSR and CSR Plus Groups’ Cue Sheets Used in the Intervention (Adapted from Klinger & Vaughn, 1998)

Today’s Topic:		Date:
Before Reading	During Reading	After Reading
Knowledge: Write what you already know about the topic?	Clunks: Make a list Clunk number one: Clunk number two: Clunk number three:	Questions and discussions: Generate questions about the main ideas discussed in the text

Predictions: What will you learn?	The gist: Write the gist for each section	Review: What did you learn? Summarize the important ideas.
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From week four to week nine, the same teaching procedures as the third week were implemented with the CSR and the CSR Plus group but trying different reading comprehension texts each week. All reading comprehension passages are provided in the Appendix G.

3.6.3.2 Intervention Implemented with the Control Group. The same reading comprehension materials were provided to the Control group as the CSR and the CSR Plus groups, however, different teaching procedures were followed. That is, unlike the Intervention groups, participants in the Control group did not receive any teaching of the CSR strategies and were not exposed to work in groups.

In the beginning of each session, the teacher initiated the instruction by explaining to students that they would be provided with printed copies of a reading comprehension passage with a number of questions to answer individually. The teacher first read the text one time to the whole class, then invited the students to read it again to the whole class. Each student who volunteered to read was required to read only a part of the text, then another student was invited to complete reading the passage. The text was read three times by the students to allow them to be familiar with its content.

After that, the teacher read the first reading comprehension question then asked for answers from the students. At this stage, the teacher did not comment on whether the answers were true or false, but tried to invite as many answers as possible from the students. Each student who provided answers to the reading comprehension questions were required to provide evidence for their

answers. The teacher then further gave the correct answers for each reading comprehension question based on valid arguments from the passage.

3.6.3.3 The Attributional Feedback Intervention Implemented with the CSR Plus

Group. The training sessions with the CSR Plus group were the same as the CSR group. However, they received an additional treatment, which was attributional feedback. The purpose of this ‘enhanced’ intervention was to encourage students to ascribe their reading comprehension performance outcomes to the selection and use of the most appropriate or inappropriate reading strategies taught within the CSR approach. This training intervention was also anticipated to be helpful in changing learners’ maladaptive attributions to more adaptive factors which might positively influence their motivation, self-efficacy perceptions, and hence their reading comprehension outcomes.

The attributional feedback was undertaken with the CSR Plus group at the end of each reading comprehension session after the group work activities. Participants were asked to submit their logs after each two sessions of the CSR intervention from week four onwards, once their understanding of the CSR approach had been developed.

In each session, 30 minutes was devoted for the participants to report in their learning logs:

1. Their reflections on which strategies they used.
2. How far they felt the strategies were helpful,
- and 3. Their future plans to improve the use of the CSR strategies.

In writing their learning logs, participants were given a choice to write them in English or in Arabic. However, all submitted logs were in English, and were submitted for the texts used in the first three sessions of the intervention.

Once learners had submitted their learning logs diaries to the teacher with their answers on the reading comprehension tasks, the teacher provided written feedback on both reading

comprehension performance and strategy use. That is, the teacher gave marks to the participants based on the correctness of their answers to each reading comprehension question which they completed individually at the end of each session. Additionally, through feedback, the teacher tried to link learners' performance to their appropriate or inappropriate use of the CSR strategies. In other words, the teacher also gave feedback on students' strategy use with a focus on the appropriate use of the CSR strategies to answer the reading comprehension questions. For instance, in order to generate the main idea of a text, students were advised in the feedback to keep only the necessary information and disregard the unnecessary details.

The logs with the teacher feedback were returned to the participants in the following session. After that, students read the teacher's feedback and were asked again to comment in their logs on how well they thought their reading comprehension would be improved as a result of the attributional feedback and to think about their future plans for using the feedback to improve their use of the CSR strategies and hence their reading comprehension after the class. An example of a submitted learning log with the teacher's feedback and the learner's response is outlined in Figure 3.8.

Figure 3.8*Student's Submitted Learning Log with the Teacher's Feedback***Topic: Do people like their first names? Most do-or eventually will**

Good answers to the reading comprehension questions. I guess you've been using the CSR strategies effectively. However, I want to highlight some important points related to the use of the CSR strategies: First, in section "A", you're asked to look at the people in the pictures and guess who said each of the statements. This involves the use of the pre-reading strategy (predicting) before proceeding to read the text. In section "B" and "C", you should apply the during reading strategies (getting the gist and fixing up the clunks) since you're required to get the important idea of each paragraph (getting the gist in section B), and also using fix up strategies to get the meaning of some words in section C.

How well you think your reading comprehension will be improved as a result of this feedback?**Think about future plans to improve the use of the CSR strategies?**

I believe this feedback will help me in order to improve my reading comprehension because now I know how to apply correctly the CSR strategies such as the use of the pre-reading strategies which am not used to. Concerning my future plans to improve the use of the CSR strategies, respecting all the three steps of the CSR strategies which are: before reading: in this step I predict the content of the text from the title or the pictures if there were any. Then, the second step is during reading. Here I see if there are any difficult words and I'll try to break down the words into smaller parts. The last step, which is after reading in which we see what information we learnt after we analyzed the text by that we applied all steps correctly and effectively.

3.7 Pilot Study

A pilot study is a preliminary description and a try-out phase of the main study to test whether the different tools can work well all together to achieve the aim of the study, and which then may lead to some changes in the main study (Arain et al., 2010). Prior to conducting the main study, the whole research procedures including data collection tools were tested with a sample of 33 students who were not the same as the participants in the main study in order to reveal any deficiencies of the research design and instruments. The sample chosen to participate in the pilot study had the same characteristics as those of the main study in terms of language proficiency, age, English language learning experience, and level of education.

3.7.1 Analysis of Pilot Study Findings

The piloting of the pre-test data collection tools was conducted with the participants over two sessions. Students were first given an English placement test in class to measure their proficiency in English. Then, they took a reading comprehension test in English. Immediately after that, they were asked to complete an English reading questionnaire that asked about their level of self-efficacy, and attributions for their outcomes in reading comprehension activities (causes for both successful and unsuccessful achievements). Two volunteers were then invited to take part in an interview for further exploration of their experience in dealing with reading comprehension activities, their use of reading strategies, and how did they deal with the reading breakdowns they came across.

After trying out the pre-test data collection tools, the chosen sample were exposed to training in the use of the CSR approach and feedback in two sessions, with each session lasting for approximately 90 minutes. First, the researcher introduced the CSR approach to the participants by giving them CSR prompt sheets which explained in detail how this approach works. After they developed an idea about the CSR approach, they were asked to randomly form small groups with five individuals in each group. The total number of students was 27, and thus there were five groups with two teams containing six students. A short reading comprehension task containing five questions was delivered to them. Each student was assigned a role in completing one reading comprehension question. After they worked in small groups on the reading comprehension task, students were asked to write individually what strategies they followed when accomplishing the task. The researcher provided feedback on their performance based on the correctness of their answers to the reading comprehension activity and also gave feedback on the use of the reading strategies used to work on the reading comprehension task.

The intervention phase in the pilot study was launched without a Control group; there was only a treatment group which received both instruction on the CSR and the attributional feedback. The aim behind excluding a Control group is that at this stage, the researcher sought to measure the quality of the research tools and procedures only and not to compare or relate findings of different groups based on the instruction.

Finally, after testing the procedures of the intervention, the instruments used at the pre-test were again administered to students after the CSR and feedback implementation during the post-test phase over two sessions, except for the placement test which was used at pre-test only. An additional questionnaire about students' views about the implementation of the instruction was administered at the end of the training sessions.

3.7.2 Changes Applied to the Research Procedures and Instruments after the Pilot Study

3.7.2.1 The Placement Test. The overall scores of learners in the placement test ranged between 25/70 and 55/70 which denoted that the level of difficulty was appropriate (range=30). Additionally, for the internal consistency of the test, reliability test using Cronbach's alpha was calculated. That is, students' scores on the 50 questions of the grammar and vocabulary section, the 10 questions of the reading comprehension section, and the last section on writing were entered as items into SPSS 25. There were overall 61 items of the test, and Cronbach's alpha calculated was .685. According to Vaske et al. (2017), "By convention, an alpha of .65–.80 is often considered "adequate" for a scale used in human dimensions research" (p. 165). Therefore, the placement test seemed to be of acceptable internal consistency.

Piloting of the placement test resulted in applying many changes to the whole test. For example, the number of questions in the first section of grammar and vocabulary which was

claimed by the respondents to be too long was reduced in the main study. This section contained 50 questions compared to the reading comprehension section which had only 10 questions, and there were some statements which repeated the same category of questions. Many statements in the grammar and vocabulary section (29 questions) asked students to use the correct form and tense of the verbs. Eight questions (14, 27, 32, 38, 40, 44, 45, and 50) required that students should choose between the simple past, present/past continuous, simple present, present/past perfect. So, only four questions were kept and the other four were removed in the main study based on students' answers to the eight questions. In other words, the majority of students were found to answer questions number 38, 40, 45, 50 wrongly or left them blank, thus they were removed from the test in the main study.

Another issue was found with the reading comprehension section in which the text was long, and students did not manage to finish the last section of it. Accordingly, the penultimate paragraph and its two questions were removed. Another reliability test using Cronbach's Alpha was run with those items deleted from the grammar and vocabulary section, as well as the reading comprehension section and the value was slightly increased to .686.

In summary, after piloting the placement test, the overall possible score for this test was 64 in the main study. The first grammar and vocabulary section contained 46 written statements instead of 50. The reading comprehension section consisted of eight questions in the main study after the piloting. The time allocated to complete the placement test was 45 minutes as stated in the consent form; however, it has been found that most students in the pilot phase did not manage to answer even the whole first section of the test. Therefore, another 15 minutes was devoted to completing the test in the main study.

3.7.2.2 Pre-and Post-test Questionnaires in the Pilot Study. Statistical analysis of reliability of the pre-and post-test questionnaires of the present study was run using SPSS Statistical 25. Cronbach's Alphas for the questionnaires are summarized in Table 3.6

Table 3.6

Reliability Statistics for the Questionnaires in the Pilot Study

Questionnaire items	Cronbach's alpha	Number of items
English reading pre-test questionnaire	.786	27
English reading post-test questionnaire	.889	27
Evaluation questionnaire of the intervention	.829	33
Pre-test self-efficacy	.891	14
Post-test self-efficacy	.924	14
Pre-test success attributions	.531	6
Post-test success attributions	.361	6
Pre-test failure attributions	.590	6
Post-test failure attributions	.749	6
Perceptions of the CSR instruction	.876	17
Perceptions of the feedback instruction	.612	14

Items of the questionnaires were divided into sub-sections and the reliability of each sub-section was calculated (Table 3.6). The reliability of the total items of the questionnaires was high, however, some sections were of a very low reliability (.361). One possible explanation for the low value of Cronbach's alpha may be the small number of questions in these sub-sections as suggested by Tavakol and Dennick (2011). Another reason for this is possibly related to the respondents' affective factors such as their mood at the time while completing the questionnaire (Thorsen & Bjorner, 2010).

Despite the fact that success attributions in both pre-and post-test questionnaires represented the lowest reliability with Cronbach's alpha .531 and .361 respectively, these two items were retained in the main study. One reason for keeping these items is that attributions were an important aspect of the main study which may have an impact on reading comprehension performance and sense of self-efficacy among learners before and after the intervention. Another reliability statistics test 'if item deleted' was run as one way to check if the reliability of these sections could be improved by removing an item, Cronbach's alpha was found to be decreased. Therefore, to improve the reliability of these sections, more items were added. Participants were asked to attribute their success or lack of success in the reading comprehension activities to other factors other than effort, luck, strategy use, and ability as mentioned in the original questionnaires. Grammatical and vocabulary knowledge, affective factors (motivation and tiredness), and consistency in dealing with the reading comprehension activities play an important role in learners' achievements in dealing with any language tasks that they come across. By adding these elements to the English reading questionnaire, the total number of items in success and lack of success attributions in both tests would be ten. Subsequently, the risk of low reliability might be avoided as suggested by Bolarinwa (2015) that the number of items which are less than ten are one reason for the low reliability level.

Furthermore, many other issues had been raised after the pilot study. For example, question 16 in the English reading questionnaire had been accidentally mis-worded. That is instead of 'I've been more successful', it had been written as 'I've been less successful' which caused confusion to the respondents. This was then re-worded in the questionnaire for the main study.

The open-ended questions in the English reading questionnaire used at pre-test and post-test were kept in the main study. Students were asked to state any additional factors that caused them success or lack of success in the reading comprehension activities. The respondents tried not to leave the question blank by only writing that there were no reasons besides what was stated in all statements of the questionnaire.

In the evaluation questionnaire of students' perceptions of the attributional feedback intervention in which Cronbach's Alpha level was .612, reliability statistics 'if item deleted' was run as one way to check if the reliability of the instrument could be improved by removing an item. Cronbach's alpha was raised to .802 if the item 'teachers should provide feedback on students' use of reading strategies' was deleted. However, this item represented an important element in this study because one research question aimed to find out students' perceptions of the feedback instruction as well the extent to which this feedback may influence students' reading comprehension performance and sense of self efficacy. It was thus decided that this individual item would be deleted from the questionnaire and merged with the item asking about students' perceptions of the teacher feedback on their performance. That is, to what extent students agreed that teachers should provide feedback on both students' reading comprehension performance and strategy use appeared as one integral question instead of asking about feedback on performance and feedback on strategy use separately. However, this should be borne in mind as one limitation because it asked two questions at once.

Students were asked to complete a questionnaire on their perceptions of the instruction they received. However, it was noted that the participants struggled to fill out their answers because of the repeated acronym 'CSR' which caused them confusion, particularly, in the first question when the word 'CSR' appeared for the first time. A possible explanation for this confusion is the short exposure to the instruction (only two sessions) which was not enough for them to memorize the full name of the approach. Another possibility is that the researcher kept using 'collaborative strategic reading' instead of 'CSR' to remind the participants about the name of the approach. The CSR acronym was replaced by the whole concept 'collaborative strategic reading' in the main study.

Additionally, the meaning of the word 'enhance' in one statement in the evaluation questionnaire was changed to 'improve' instead, because the participants seemed not to be familiar with this word as many of them asked the researcher about its meaning. Although the respondents seemed to face difficulties in recognizing the meaning of a number of words, the structure of the questionnaire was not an issue for them; they only needed approximately 20 minutes to complete all the questions.

Despite that not all respondents replied to the open question about the greatest difficulty they faced with the implementation of the instruction, this question was not removed from the questionnaire. One reason for keeping this question is that the length of the instruction was not that long (only two sessions) to give an opportunity to students to think about what it did not work well with them.

3.7.2.3 Reading Comprehension Test used at Pre-test and Post-test. Twenty-seven (27) students completed the reading comprehension test at pre-test and scored between 14/45 and 45/45. Internal consistency for the test measured using Cronbach's Alpha indicated that the test was of acceptable reliability statistics (.689) as suggested by Vaske et al., (2017). Additionally, the

estimated time to complete the test was not enough for many participants, therefore, 90 minutes instead of 60 minutes were allocated to complete the test in the target main study. The length was also revised as most students claimed that it was too long for them to complete.

The overall number of questions was reduced from 45 to 40 only. One question was deleted from each section based on students' answers. That is, the questions that most students did not answer, or they answered wrongly, were omitted (one from each of the first, second, and last sections, and two from the third section). In question five, students were given four options and they had to select which one of them was closest in meaning to the word 'illegitimate' in the first paragraph. Many students got this item wrong, perhaps because in the correct option 'born out of wedlock', the term 'wedlock' which was new for them. Hence, in the main study, this word was better replaced by a more common word 'marriage' to facilitate students' understanding.

The reading comprehension test used at post-test was only completed by 14 participants whose scores were lower than those of the pre-test. The test was found to have a very low reliability (Cronbach's Alpha of .452). Therefore, the length and the level of difficulty of the reading comprehension test were revised in the main study. Participants who scored high in the pre-test found it difficult to complete the post-test and to achieve good results. For instance, one student scored 40/45 in the pre-test, scored only 20/50 in the post-test, and another one scored 00/50 compared to 20/45 in the pre-test. These results suggest that both reading comprehension tests were not of comparable difficulty. Therefore, the whole reading comprehension used at pre-test was again used at post-test to investigate any possible improvements in students' reading comprehension scores after being exposed to the CSR and the attributional feedback instruction. However, one problem that might result from using the same test would be that students could remember the reading comprehension passages with the questions, and this may affect the reliability of the whole

research project. One way of avoiding this was that participants in the main study were not informed that they would retake the same test in another occasion, and they were not provided with an answer key for the test.

3.7.2.4 The Interview. The interviewees faced difficulty when they were asked ‘When you do well in reading comprehension activities, what do you think the reasons for that are? When you do not do well, what do you think the reasons for that are?’ This statement was poorly worded, and it was changed to ‘When you achieve good results in reading comprehension tasks, what do you think the causes for this good performance are? When you get bad results in reading comprehension activities, what do you think the causes for this are?’

The last question asking students ‘How do you feel about yourself as a learner of English as a foreign language?’ was deleted in the main study. When the interviewees were asked this question, they answered the same as for the second question asking about their level in English.

In the post-test interview, participants used the same answers as in the pre-test interview assuming that they would reply in the same way. They used to a great extent the expression ‘as I told you before’ referring to the pre-test interview. The interviewer then tended to clear this confusion by using the expression ‘after being exposed to the training sessions’ and carried on asking all the questions.

3.7.2.5 The Intervention. When asked about their perceptions of the CSR approach, 55.6 % of the pilot study respondents perceived the CSR approach positively. That is, they strongly agreed that the CSR was an effective approach for teaching reading comprehension. Similarly, when the respondents were asked about their views about the attributional feedback intervention, 55.6% strongly disagreed that they were unhappy to receive this instruction.

One issue raised during the implementation of the intervention was that when students were asked to form groups, only members who knew each other agreed to be in the same group and this caused distraction to the whole class. In the main study therefore, students were put in smaller groups based on their total scores in the placement test. Additionally, throughout the intervention, the same groups working together were kept to maintain collaboration among learners. If the same groups were changed each time, this may result in students' taking time to get acquainted with the new members, and thus affecting their involvement in the group work activities.

3.7.2.6 The CSR Learning Logs. Students received instruction on the CSR and attributional feedback over two sessions in the pilot study phase. In the last intervention session, they were given a short reading comprehension task to work on collaboratively in small groups of five members. There were five questions and each student was required to answer one question. Students were also asked to produce a summary of what they learnt from the text, and what strategies they followed to answer the reading comprehension questions. The researcher then gave feedback on students' correctness of answers, summaries, and use of strategies, and gave them back to the participants to read, and fill in the post-test phase questionnaires. Learning logs were submitted once only during the pilot study phase. However, no issues appeared with the learning logs in the pilot study phase.

3.8 Reliability and Validity of the Present Study

In order to enhance the rigour of the quantitative and qualitative research paradigms in the present study, different techniques were followed to increase reliability and validity of the study. First, triangulation is one important aspect to enhance the validity of the research through using multiple data collection tools (W. Creswell & Miller, 2000). Therefore, in the present study, data were gathered using multiple data collection tools (both qualitative and quantitative data collection

methods) to gain in-depth insights into the phenomenon under study and hence, to maximise validity and reliability. Furthermore, piloting all data collection instruments, keeping records of interviews, test-retest, and reverse item coding are all important aspects of ensuring and increasing validity and reliability of the research study (Lodico et al., 2010). That is, the whole data collection tools in the present study were piloted and changes were applied to the main study. Reliability of both qualitative and quantitative research designs could be enhanced through test-retest reliability (administer the same test at two different points of time (pre-test and post-test) and using the same teaching materials with the Intervention and the Control groups except for the instruction which only the Intervention group received. For example, the reading comprehension TOEFL test (retrieved from Formation-anglais-paris.com available on http://formation-anglais-paris.com/sites/default/files/soal-toefl-02-logo_1.pdf) in the present study was used at the pre-and the post-test phases to measure students' potential improvements in reading comprehension ability at two different points of time. The English reading questionnaire was also administered to participants at pre-test and post -test phase to investigate changes in their levels of self -efficacy perceptions as well as their causal attributions for success and lack of success in the reading comprehension activities across two different points of time.

Additionally, although questionnaires are widely used as a tool to collect data, they do have some disadvantages, which may threaten the overall reliability and validity of the present study. One problem with questionnaires is the 'low response and return rate'. Not all the target respondents answer the administered paper and pen questionnaire, and return it back to the researcher, and hence this may affect the validity of the study (Seliger & Shohamy, 1989). In addition to the low response and low return rate, another shortcoming is that the researcher may not obtain more elaborate answers to questions from the respondents (L. Cohen et al., 2018). That is,

participants may not be accurate in answering the questions as they may not understand them, or they may not think what the researcher exactly means, as they cannot ask for clarification. Subsequently, there was no assurance that responses provided in the questionnaire properly reflected what the respondents really thought or believed. To overcome this problem, further information about the responses provided in the questionnaires were remedied in this study using an interview and learning logs diaries. Moreover, students' responses in the interviews were audio recorded so that to ensure that the researcher did not skip any necessary pieces of information and details essential for answering the research questions of the study, and therefore, validity of the tool might be improved.

Despite the fact that learning logs are a useful method that may help the learners to keep track on their learning, there still exists some potential problems. For example, in an EFL classroom, learners may be reluctant to keep logs as they find it difficult to write them in English, thus, in this study participants in the CSR Plus group were given a choice whether to write them in English or in their mother language (Arabic).

Another measure of reliability is the statistical Cronbach's alpha measures. The latter predicts the internal consistency of items in the instrument to ensure that all items measured the same construct. The higher the Cronbach's Alpha, the more reliable is the instrument (generally near 1). However, a crucial point to measuring reliability is the reverse coded items which may affect the overall Cronbach's Alpha. The use of reverse items of the questionnaire was taken into consideration when entering quantitative for analysis into SPSS, and hence the reliability of the tool might be increased.

Research bias is also be another problem which might affect the overall findings of the study, and hence validity of the study. Therefore, efforts were made to overcome the researcher bias

in this study. Students' placement test and reading comprehension test were blind marked. That is, the researcher asked students to write down their student number (ID numbers) in the answer sheet. As the researcher was unable to remember all students' numbers, this mitigated research bias to a certain extent.

3.9 Ethical Considerations

The present research study involved human individuals as participants, thus, obtaining ethical approval was necessary for protecting them from any unpredicted risks. The researcher explicitly explained to all participants the overall aim of the study, rationale for choosing them, and guidelines of their anonymity and confidentiality, which would be protected along the study.

Ethical considerations in the present study were maintained through discussing issues related to the relationship between the researcher and the participants (authority and power), and students' views about the impact of their consent to take part or reject to participate in the study. For example, in terms of power and relationship between the researcher and the participants, the researcher as a teacher attempted to keep distant and avoid making intimate friendship relationships with the participants as this may negatively affect the management of the classroom, delineate boundaries, respect, and personal disclosure, because, "Different readings of researcher identity have implications for how the participant interprets the researcher's behaviour, and how they envision their relationship with them" (Paoletti et al., 2013, p. 159).

The researcher's position in the classroom was also carefully treated, in order to maximize students' interest in the study and hence influencing the findings of the study. According to Harjunen (2009), 'pedagogical authority' refers to positive authority in which a mutual respect and co-operation in the classroom is required for the teaching learning process to take part. To ensure

the teacher's power in the present study, the researcher acknowledged and valued students' views and maintained the classroom management by being the authority in the classroom. However, teacher authority does not mean the authoritarian or the bureaucratic power that considers the inferiority and the powerless of learners. In other words, by being the authority in the classroom, the researcher tried to keep the good atmosphere for the teaching and learning process, and not to make learners afraid of asking questions and taking part in the learning activities. By explicitly stating in the information sheets that their involvement or non-involvement in the project would not have any impacts on their academic grades, and that their privacy would be safeguarded, students' concerns about their course grades and fake behaviours trying to please the researcher would be avoided.

Prior to conducting the pilot study, ethical approval from the Institute of Education Research Ethics committee was obtained after reviewing the data collection design and instruments (Appendix O). After obtaining the approval to conduct the study, an information sheet and a consent form were given to the head of the English department in Algeria who agreed that his institution will take part in the pilot study (Appendix P). Similar to the pilot study, a consent form and an information sheet written in English were given to the head of the department and the participants before starting the main study. The information sheets also gave a detailed description of the different tools used in the study; however, the participants were not told that they would be compared with students from other groups. That is, they were not informed whether they were in the Control or the Intervention groups, because this might affect their behaviours in the training sessions, and hence may threaten the reliability of the data.

Participants' information sheets were provided for students (See Appendix Q) to explain why they had been chosen to take part in the study, to clarify that their participation was voluntary, confidential and that they could withdraw at any time they wished. Having agreed to take part in the

study, the participants signed the consent form (Appendix Q), and the pilot and the main study were initiated. Different procedures followed by the researcher were also described in detail in the participant information sheets for the head of the department and the students in the department.

In order to avoid any issues, participants were provided with contact details of the project team members including the researcher herself, the main supervisor, as well as the second supervisor. This was provided whenever the participants required more information about the study. Additionally, the participants were instructed to avoid using their names when filling the questionnaire to maintain that their answers remain anonymous. The pre-and post-test interview were conducted with each student individually in front of the teacher only and audio recorded in a convenient place and time to them. For the quantitative data collected from the questionnaires and the language tests, the researcher asked the participants to refer to their ID numbers instead of writing their full names to protect their confidentiality.

3.10 Data Analysis

In the present study, analyses of quantitative and qualitative data were undertaken separately. Findings of the reading comprehension test, the placement test, the English reading questionnaire, and the evaluation questionnaire of students' perceptions were analysed numerically using statistical procedures. By contrast, transcriptions and coding the data were used to analyse results of the semi-structured interview and the learning logs. The researcher then integrated both the quantitative and qualitative data to get in depth insight into the phenomenon under investigation.

3.10.1 Quantitative Data Analysis

3.10.1.1 Marking Scheme and Preparing Data for Analysis. Preparing the data for analysis was done separately for the placement test, the reading comprehension test, the English

reading questionnaire, and the evaluation questionnaire. More details are given in the following sections.

3.10.1.1.1 The Placement Test (out of 64). The placement test used with the Control, the CSR, and the CSR Plus group was based on multiple-choice questions for sections on grammar and vocabulary and reading comprehension. Therefore, the marking scheme which was undertaken by the researcher herself was based on accepting only the correct answers which counted for one mark each. That is, each correct answer to the multiple-choice questions was worth one point. There were 46 statements in the first section on grammar and vocabulary which asked the participants to select the appropriate form of the verbs (grammar), and to use the right words to complete the meaning of each statement (vocabulary).

For the reading comprehension section, it was composed of eight multiple choice questions for the participants to complete once they read the passage. In the writing section, students were required to produce a short paragraph on a topic about a trip they had taken. However, for this section, students were given two scores for each of the aspects below (Table 3.7). Therefore, the overall mark of the test was 64. Marking the writing section by the researcher herself alone might be subjective, yet, there was no opportunity for the scores to be checked by another person for the limited time allocated for the pre-test data collection phase which was conducted over the first week of the project.

Table 3.7

Marking Scheme for the Writing Section in the Placement Test Used at Pre-test

Aspects of the writing section	
Content	Relevant ideas to the topic.
Organization	A good organization of the essay (introduction, main body, conclusion) as well as use of appropriate transitions.
Mechanics	Punctuation, capitalization, and spelling.
Grammar	Correct use of tenses, sentence formation, correct order of subject verb, subject verb agreement.
Writing style	Use of appropriate language related to the topic.

3.10.1.1.2 Reading Comprehension Test (out of 40). The reading comprehension test used at pre-test and post-test was a multiple-choice question and was scored out of 40 after changes were applied when conducting the pilot study. That is, the maximum overall score was 40 with one-point for each correct answer. The test was marked by the researcher herself. The same marking scheme was used to score the test at post-test because the same reading comprehension test was used at both pre-test and post-test.

In order to measure students' performance in the reading comprehension test across times (pre-test and post-test) and condition (Control and Intervention groups), descriptive analysis such as calculating mean, standard deviation, minimum and maximum were used. Changes in students'

reading comprehension scores from the pre-test to the post-test in the Control and the Intervention groups were also compared using ANOVA. The latter was run to examine if differences existed in students' reading comprehension scores across times (pre-test and post-test) and conditions (Control group, the CSR group and the CSR Plus group) at the end of the intervention. Overall, the choice of which statistical analysis was based on the aim of the different research questions of the study and also on whether the data met the assumptions for different tests. More details about the tests run in the present study are found in the Quantitative Findings Chapter (Chapter 4).

3.10.1.2 Questionnaires Data Preparation for Analysis.

3.10.1.2.1 The English Reading Questionnaire. The use of the English reading questionnaire in the present study aimed to explore participants' self-efficacy perceptions and attributions for their success and failure in the reading comprehension activities. For self-efficacy perceptions, questions number 1 to 13 in the questionnaire were used to measure the sense of self-efficacy of the participants in the three groups before and after the training sessions. Participants in the Control, the CSR, and the CSR Plus groups were asked to circle a number from 0 (not sure at all) to 100 (completely sure) about their perceived abilities in the reading comprehension activities. The overall self-efficacy score for each participant was calculated by combining scores from all self-efficacy items together. Data were then entered directly to SPSS 25 as it was already in numerical form.

Similar to the reading comprehension scores, in order to measure students' levels of self-efficacy in the English reading questionnaire across times (pre-test and post-test) and condition (Control and Intervention groups), descriptive analysis such as calculating mean, standard deviation, minimum and maximum were used. Additionally, changes in students' scores from the pre-test to the post-test in the Control and the Intervention groups were also compared using

different tests based on the different assumptions of the tests required. For example, ANOVA was run to examine whether there were differences between students' self-efficacy scores across times (pre-test and post-test) and conditions (Control group, the CSR group and the CSR Plus group). Chapter Four provides a detailed description of the tests used in the present study.

Another important aspect of the present study was to investigate whether there were changes in students' attributions for success or failure in dealing with reading comprehension activities after the intervention. Statements 14.1 to 14.10, and statements 15.1 to 15.10 in the English reading questionnaire were used in the present study to develop an understanding of participants' reasons for their success or lack of success in the reading comprehension activities.

Students in the Control and the Intervention groups were asked to circle a number from 1 (strongly disagree) to 6 (strongly agree) about the perceived factors for their success and failure in the reading comprehension activities. The items used included strategy use, ability, task difficulty, luck, grammar and vocabulary, motivation and tiredness, and perseverance. The overall score for each participant was calculated by combining scores from the attributions items together. Different attributions were divided into internal and external attributions for both success and failure, and analyses were run separately for success and failure, as well as internal and external attributions. Data were then entered directly to SPSS 25.

Furthermore, because the CSR Plus group received the enhanced feedback treatment on their strategy use, an analysis of their attributions for the strategy use factor was also run separately from the internal and external attributions. The English reading questionnaire used in the present study included two statements 14.2, and 15.2 respectively which asked students to circle a number from 1 (strongly disagree) to 6 (strongly agree) to think about strategy use as a factor for their

success and failure. Differences between the pre-test and post-test and across the three groups were explored.

3.10.1.2.2 The Evaluation Questionnaire of Students' Perceptions of the Intervention. A number of items in the questionnaire included some reverse scored questions which were recoded when entering them into SPSS 25. For example, the 6-point Likert scale in statements negatively worded on students' perceptions of the CSR instruction questionnaire were reverse scored, so 1 (which is strongly agree in the positive statements) became 6 (strongly disagree in the negative statements), 2=5, 3=4, 4=3, 5=2, 6=1. However, the positively worded items were entered directly for analysis into the SPSS software. Then, frequencies and percentages were generated. For the open-ended question in the evaluation questionnaire, students' responses were read several times and coded for different themes that emerged.

3.10.2 Qualitative Data Analysis

The qualitative data of the present study were gathered from the semi-structured interview and the learning logs. The aim of the qualitative data collection methods is to add strength to the study, confirm and explain data collected from the quantitative tools such as the questionnaires and the reading comprehension test in the present study.

3.10.2.1 Interview and Learning Logs Transcriptions and Coding

3.10.2.1.1 The Semi-Structured Interview. The semi-structured interview was chosen in the present research project to investigate students' views about the CSR and feedback intervention, attributions for their success and lack of success, strategies they used to deal with reading comprehension activities, in addition to the different ways they used to deal with the difficult words they came across while reading. Students' responses were audio recorded for the researcher to

provide an accurate and an exact record of the interviewees' responses, enabling quoting the exact words if needed.

Transcripts from the interview findings (18 interviews, nine from each of the pre-test and post-test phase) were read carefully by the researcher to have a clear idea about the most commonly given answers. Then, using NVivo, transcripts were labelled and coded into different categories based on the aim of the interview. The most important codes which are relevant to the study were brought together to create different data categories or themes related to the study. That is, reflections on students' perceptions of the instruction, their reading comprehension proficiency and sense of self-efficacy, and attributions were based on the frequency of their answers as verbalized in the audio records.

Interviews in English were transcribed directly into English, and those in Arabic transcribed in that language and then translated into English. However, in order to ensure the reliability of the translated interviews, a translated version of the interview with the original version was given to another researcher whose native language is Arabic and who is also fluent in English. For those parts in French, they were not checked because there were only few words the interviewees attempted to use. That is, the use of French was minimal compared to Arabic and English.

After that, once the interviews were double checked by another researcher, different steps were followed to analyse the qualitative data gathered from them. The researcher read the transcriptions carefully many times and different codes appropriate to the research study were created. Examples of the codes included reading strategies used, attributions for success and failure, students' perceptions of the intervention (See Chapter 5 for more details). The researcher then created a codebook and provided an example of each of the pre-test and post-test interview to another researcher to apply the codes, in order to increase the validity and reliability of the study.

3.10.2.1.2 The CSR Plus Learning Logs. Learning logs was another qualitative data collection tool implemented in the present study. Students in the CSR Plus group were asked to write down what strategies they used successfully or those which were difficult for them to understand or to use while undertaking the reading comprehension activities. Participants were also asked to provide their views about the effectiveness of the CSR strategies, future plans to improve their use of those strategies, and also their perceptions of the teacher's feedback on their performance and strategy use.

The researcher commented on students' logs and gave them back to them for further comments from the students. The CSR strategies used effectively or ineffectively by students were identified and classified into categories of pre-reading, during reading, or after reading strategies. Once the teacher provided her feedback, she returned the logs back to the participants to comment on the feedback by providing their views on the effectiveness of the feedback on their reading comprehension performance. Students' perceptions were then generated from the learning logs. Themes created for students' perceptions of the intervention were generated based on their responses and were divided into positive and negative perceptions. Therefore, the researcher paid attention to the questions provided for the participants to guide them in writing their logs in creating the different themes:

1. Their reflections on which strategies they used.
2. How far they felt the strategies were helpful
3. How they intended to improve their use of the CSR strategies in the future.
4. Their perceptions of the teacher's feedback on their reading comprehension performance and strategy use.

3.11 Chapter Summary

This chapter began by describing the research design and context of the present study, providing description of participants, and also outlining the data collection tools and procedures for the pre-test, the intervention and the post-test phases. A detailed description of the qualitative and quantitative data collection instruments including the placement test, the reading comprehension test, English reading questionnaire, evaluation questionnaire, interview, and learning logs was outlined.

Analysis of the pilot study findings with a summary of changes applied to the main study after conducting the pilot study are also provided in this chapter. Issues of maintaining validity and reliability in the present study, with procedures necessary for ethical considerations of the participants, are provided in this chapter. The final part of the chapter moves to outline the different quantitative and qualitative methods to analysing the data.

CHAPTER FOUR. QUANTITATIVE FINDINGS

4.1 Introduction

This chapter presents the findings of the research gathered from analyses of the placement test, the reading comprehension test and the questionnaires to answer the research questions. A variety of statistical tests were run in order to gain deeper insights about the present research topic. Results from each statistical test are provided in this chapter to address the following research questions:

1. To what extent does CSR and attributional feedback on strategy use and reading comprehension performance affect students' reading comprehension performance, sense of self-efficacy, and causal attributions?
2. Do students of different proficiency levels benefit differently from the CSR and the attributional feedback intervention with regards to their reading comprehension and self-efficacy?
3. What are the perceptions of Algerian EFL university students of the use of the CSR approach and the attributional feedback in respect of their reading comprehension achievements, self-efficacy perceptions, and causal attributions?

4.2 Quantitative Data Analysis

There was a use of a placement test at the beginning of the training program. The aim of the test was to explore students' English language proficiency in grammar, vocabulary, reading comprehension, and writing. Proficiency levels scores were generated for each student in the Control, the CSR, and the CSR Plus groups (out of 64). For all sections, the test was multiple choice questions (with four choices given in the grammar and vocabulary section and three choices

for the reading comprehension section), except for the writing section in which students were asked to produce a piece of writing. The marking scheme of the test used by the researcher herself was based on giving one point for each correct answer in the multiple-choice questions. However, for the scoring of students' writing, it was based on giving two points for each aspects of content, organization, mechanics, grammar, and the writing style (as discussed in the Methodology chapter). Thus, the maximum total score for this task was ten.

In order to explore students' reading comprehension scores at the pre-test and post-test, a standardized reading comprehension test was administered to all participants in the three groups. The reading comprehension questions for this test were all multiple-choice questions. Answers to the multiple-choice questions were marked right or wrong giving a score at each time point for all participants out of 40. Students' scores were then compared across groups and time using different statistical tests.

For the self-efficacy scores, participants were asked to reflect on their reading self-efficacy before and after the intervention using a questionnaire. The latter consisted of 13 statements that asked students to rate how confident they were that they could perform well the reading comprehension activities by recording a number from 0 to 100 (0 cannot do at all, 100 highly certain can do). Students' self-efficacy scores at the pre-test and post-test were generated for the three groups.

Attributions for success and failure in the present study were divided into internal and external factors (See Section 3.6.1.3.1 in the Methodology Chapter). Questionnaire statements 14.1, 14.2, 14.3, 14.8, 14.9, and 14.10 referred to internal attributions, whereas external attributions included statements 14.4, 14.5, 14, 6, and 14.7 (Appendix C and H). That is, effort, strategy use, ability, perseverance, motivation, and tiredness are those internal factors which are within the

individual, whereas, luck, task difficulty, grammar and vocabulary difficulty are external factors.

That is, on the one hand, students with high scores (from 1 strongly disagree to 6 strongly agree) in attributing success or failure to internal controllable factors make adaptive attributions, that is, they are more likely to believe that these factors can be changed as they are within their control.

Whereas, low scores in attributing success or failure to internal factors denote that students ascribe their achievements to maladaptive factors which they cannot control. On the other hand, high scores in success or failure external attributions mean that students believe their performance is dependent on factors which they cannot have control over (maladaptive attributions). By contrast, students with low scores in attributing success or failure to external factors are more likely to believe that these factors can be changed as they are within their control.

Students' perceptions of the CSR and the attributional feedback interventions were also addressed in this study using a questionnaire. Frequencies and percentages were calculated for a series of positively and negatively worded sentences to provide insights into students' perceptions of the intervention. That is, in a 6 point-scale questionnaire, students in the CSR and the CSR Plus groups were asked to indicate their views from 1 strongly agree to 6 strongly disagree on positive and negative statements about the effectiveness of the instruction. Additionally, participants were also asked in an open question to report the biggest difficulty they faced when being exposed to the training sessions (Appendix J and K).

Overall, the quantitative data collected from the placement test, the reading comprehension test, and the questionnaires were analysed following different statistical procedures. First, assumptions were tested for the appropriate tests used to answer the research questions addressed in the present study. Normality analysis and descriptive statistics were the first analyses undertaken in

this study, then further appropriate tests were run to allow to gather data according to the aims of the study.

4.2.1 Normality Analysis

Part of the aim of this project was to assess the extent to which the CSR and the attributional feedback instruction had an impact on students' reading comprehension performance and self-efficacy perceptions. This study, therefore, set out to assess whether a two-way interaction existed between time (pre-test and post-test), and program (Control, CSR, and CSR Plus) on the dependent variable reading comprehension and self-efficacy scores. Accordingly, parametric two-way mixed ANOVA tests were undertaken with one within- subjects variable (time: pre and post-test), and one between-subjects variable (condition: Control, CSR, and CSR Plus group). Several assumptions are required for the two-way ANOVA test to be undertaken such as the normality assumption which is discussed in this section. Other assumptions are reviewed in the relevant sections of this chapter.

The assumption of normality needed to be checked for many statistical procedures, namely parametric tests. Therefore, before running any further statistical analysis, the tests of normality were undertaken with participants' placement test scores, reading comprehension scores, self-efficacy scores, and attributions scores as the dependent variables. Statistics calculated revealed that the assumption of normality was violated in some scores (reading comprehension pre-test and post-test scores, placement test, self-efficacy pre-test and post-test scores, pre-test success internal factors, and post-test success external factors) as assessed by the Shapiro-Wilk test of normality ($p < .05$) (See Table 4.1).

Table 4.1*Normality Tests for Students' Scores*

Students' scores	Shapiro-Wilk		
	Static	df	sig
Pre-test reading comprehension scores	.926	104	.000
Post-test reading comprehension scores	.866	104	.000
Placement test scores	.944	104	.000
Pre-test self-efficacy scores	.954	104	.001
Post-test self-efficacy scores	.947	104	.000
Pre-test success internal factors	.971	104	.022
Pre-test success external factors	.986	104	.349
Post-test success internal factors	.978	104	.078
Post-test success external factors	.968	104	.012
Post-test failure internal factors	.990	104	.635
Post-test failure external factors	.981	104	.130
Pre-test failure internal factors	.990	104	.635
Pre-test failure external factors	.981	104	.130

Normality tests were also run for a second time with condition (Control, CSR, CSR Plus) as the independent variable and students' scores as the dependent variable (Table 4.2). Participants' pre-test success internal and external attributions were the only scores which had normal

distribution for the three groups. By contrast, reading comprehension pre-test and post-test scores, placement test scores, and pre-test and post-test failure internal factors were normally distributed only in the Control group.

Table 4.2

Normality Test for Students' Scores with Program as the Dependent Variable

Students' scores	Program	Shapiro-Wilk		
		Statistic	df	Sig.
	Control	.961	34	.259
Pre-test reading comprehension scores	CSR	.913	35	.009
	CSR Plus	.882	35	.001
	Control	.947	34	.098
Post-test reading comprehension scores	CSR	.855	35	.000
	CSR Plus	.899	35	.004
	Control	.966	34	.355
Placement test scores	CSR	.909	35	.007
	CSR Plus	.910	35	.007
	Control	.956	34	.186
Pre-test self-efficacy scores	CSR	.960	35	.228
	CSR Plus	.906	35	.006
	Control	.989	34	.979
Post-test self-efficacy scores	CSR	.960	35	.233
	CSR Plus	.902	35	.004
	Control	.960	34	.246
Pre-test success internal factors	CSR	.941	35	.062
	CSR Plus	.956	35	.168
	Control	.954	34	.165
Pre-test success external factors	CSR	.972	35	.506
	CSR Plus	.981	35	.806

Post-test success internal factors	Control	.975	34	.603
	CSR	.898	35	.004
	CSR Plus	.972	35	.506
Post-test success external factors	Control	.910	34	.009
	CSR	.944	35	.076
	CSR Plus	.983	35	.861
Post-test failure internal factors	Control	.985	34	.917
	CSR	.937	35	.045
	CSR Plus	.932	35	.031
Post-test failure external factors	Control	.976	34	.658
	CSR	.913	35	.009
	CSR Plus	.956	35	.174
Pre-test failure internal factors	Control	.985	34	.917
	CSR	.937	35	.045
	CSR Plus	.932	35	.031
Pre-test failure external factors	Control	.976	34	.658
	CSR	.913	35	.009
	CSR Plus	.956	35	.174

Thus, normality tests indicated that some data violated the assumption, suggesting that non-parametric tests should be used. However, Analysis of Variance (ANOVA) which is a parametric test was still run despite the fact that the assumption was not met. A. Field (2013, 2017) suggested the ‘central limit theorem’ which reveals that normality distribution tendency increases in large samples. That is, a set of data could be normally distributed, even with non-normal test score, as the sample size is large enough (over 30). This is confirmed by Weinberg and Abramowitz (2002) who stated that, “It has been found, however, that unless the parent population deviates radically from normality, a sample of size 30 or larger will be sufficient to compensate for lack of normality” (p. 276). Additionally, although some scores such as pre-test self-efficacy scores for the whole

sample were found to be non-normally distributed as assessed by Shapiro-Wilk, the graphical methods of normal Q-Q plot showed that students' scores did not deviate from normality to any greater degree (See Appendix L). Pre-test and post-test reading comprehension scores for the Control group, pre-test self-efficacy scores for the Control, the CSR and the CSR Plus group, post-test self-efficacy scores for the Control and the CSR group also did not deviate from the normality assumption.

Overall, ANOVA and ANCOVA were the only parametric tests used in the present study to explore the impact of the intervention on students' reading comprehension and levels of self-efficacy. It was also undertaken in this study to examine whether students with different proficiency levels improved in the same manner. Thus, ANOVA was used with reading comprehension scores, self-efficacy scores, and students' proficiency levels (placement test scores) in order to control for variables that might have influenced the effectiveness of the intervention, which is not possible with non-parametric statistics. Larson-Hall (2010) claimed the effectiveness of the parametric two-way mixed ANOVA stating that,

There is no non-parametric alternative to a [two-way mixed] ANOVA, but one could test the influence of each independent variable separately using the non-parametric Kruskal–Wallis test. You would not get any information about the interaction between the variables, however. (p. 142)

Therefore, the two –way mixed ANOVA test was run in the present study regardless of the violation of some assumptions because there is no alternative non- parametric test to this parametric test, which allows to test for a significant two-way interaction (Laerd Statistics, 2015; Larson-Hall, 2010, 2016) as the main focus of this study. However, the results of ANOVA needed to be interpreted with caution in view of the violation of some assumptions. Thus, additional non-

parametric analyses (Kruskal-Wallis, Mann Whitney U test, and Wilcoxon Signed Rank tests) were run to ensure that ANOVA results were not missing any effect and the results were compared to those obtained from the two-way ANOVA.

4.2.2 The Effect of the Instruction on Students' Reading Comprehension Scores, Self-Efficacy Perceptions, and Causal Attributions

The primary objective of this study was to investigate the impact of the instruction on students' reading comprehension performance, self-efficacy, and attributions, and to assess changes in their scores from the pre-test to post-test (the first research question). In order to examine the effectiveness of the instruction, analyses of the data gathered from the quantitative research tools were undertaken using both parametric (ANOVA) and non-parametric tests (Kruskal-Wallis, Mann Whitney U test, and Wilcoxon Signed Rank tests) because of the violation of some assumptions of the parametric tests.

Students' scores were first generated using descriptives, namely, minimum, maximum, mean, and standard deviation. The aim of running descriptives is to have an overview about participants' levels before and after the intervention. That is, descriptive statistics for the pre-test and the post-test scores were generated for the whole sample and for each group separately. However, further analyses were needed to explore the differences between the three groups. The next sections of this chapter provide more details on the effect of the intervention on students' scores according to the research questions addressed.

4.2.2.1 The Effect of the Instruction on Students' Reading comprehension

Performance. On the question of the impact of the intervention on students' reading comprehension performance, students' scores before and after the intervention were generated using

descriptives. That is, the minimum and maximum scores, the means and standard deviations were run for both pre-test and post-test scores for the Control, the CSR, and the CSR Plus group (Table 4.3 below).

Table 4.3

Descriptive Statistics for Students' Pre-test and Post-test Reading Comprehension Scores (out of 40)

Group	Pre-test				Post-test			
	Min	Max	Mean	SD	Min	Max	Mean	SD
Control	4.00	39.00	21.32	9.86	4.00	40.00	21.91	11.03
CSR	16.00	35.00	27.54	5.53	15.00	39.00	31.91	6.55
CSR Plus	8.00	34.00	25.06	7.68	24.00	38.00	32.60	4.05
Total	4.00	39.00	24.67	8.20	4.00	40.00	28.87	9.08

From the results presented in Table 4.3, it can be seen that mean levels of students' reading comprehension in the three groups increased from the pre-test to post-test. There was a gain score of 0.58, 4.37, and 7.54 respectively in the Control, the CSR, and the CSR Plus group. These findings indicate that the CSR Plus group made the greatest improvement, whereas there was a very slight change in students' scores in the Control group. Additionally, descriptives also indicated that within the Control group, there were students with scores approaching ceiling at pre-test, and the two Intervention groups had some scores not very far from ceiling. Further analyses were run to explore differences between the groups using both parametric and non-parametric tests.

First, assumptions of the parametric two-way mixed ANOVA related to both study design and data were tested before running the test. First, there should be two or more categories in both within and between -subjects factors (Pallant, 2016). Therefore, since the primary purpose of this analysis was to examine whether there was an interaction between time (pre and post-test) and group (Control, CSR, CSR Plus), this assumption was met. Other assumptions related to data such as normality, sphericity, homogeneity of variance, homogeneity of covariance, and absence of outliers are also necessary for valid results from the two-way mixed ANOVA (A. Field, 2013, 2017; Larson-hall, 2010; Pallant, 2016). Results for checking for these assumptions are provided in this section.

Normality test: Although students' reading comprehension scores were not normally distributed, the two-way mixed ANOVA was run as it is robust to normality assumption violation (A. Field, 2017). Full details on this assumption are discussed in Section 4.2.1.

Homogeneity of variances: This can be tested using Levene's test of equality of error variances which checks whether variances of two samples or groups are equal. Significant Levene's test level ($p < .05$) suggests that the assumption was violated and thus the null hypotheses was rejected.

Homogeneity of variances for both the pre-test and post-test reading scores was not met. Although this assumption is important to undertake the two-way mixed ANOVA, it can be violated in studies with large samples size with approximately equal participants within each group (Pallant, 2016). Similarly, A. Field (2017) suggests that the violation of assumption of homogeneity of variance matters only in studies with small and unequal number of participants. For the present study, the sample size was 104 which is greater than 30 (A. Field, 2017, Pallant, 2016), and there were 35 students within each of the Intervention groups and 34 students within the Control group which are

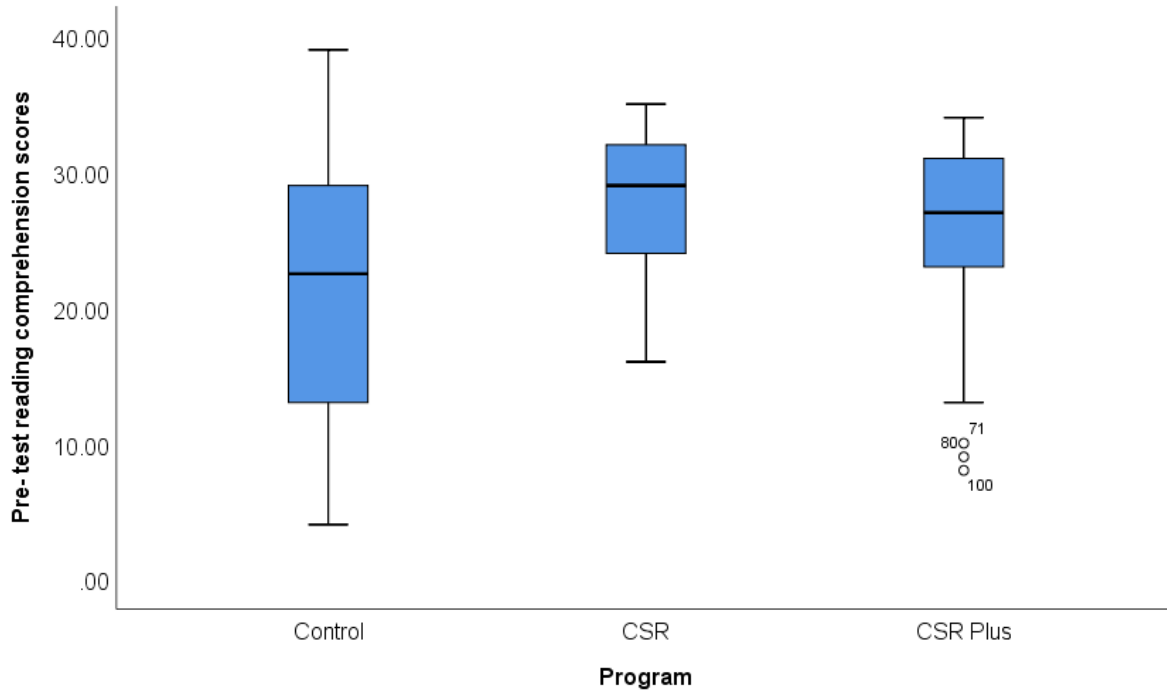
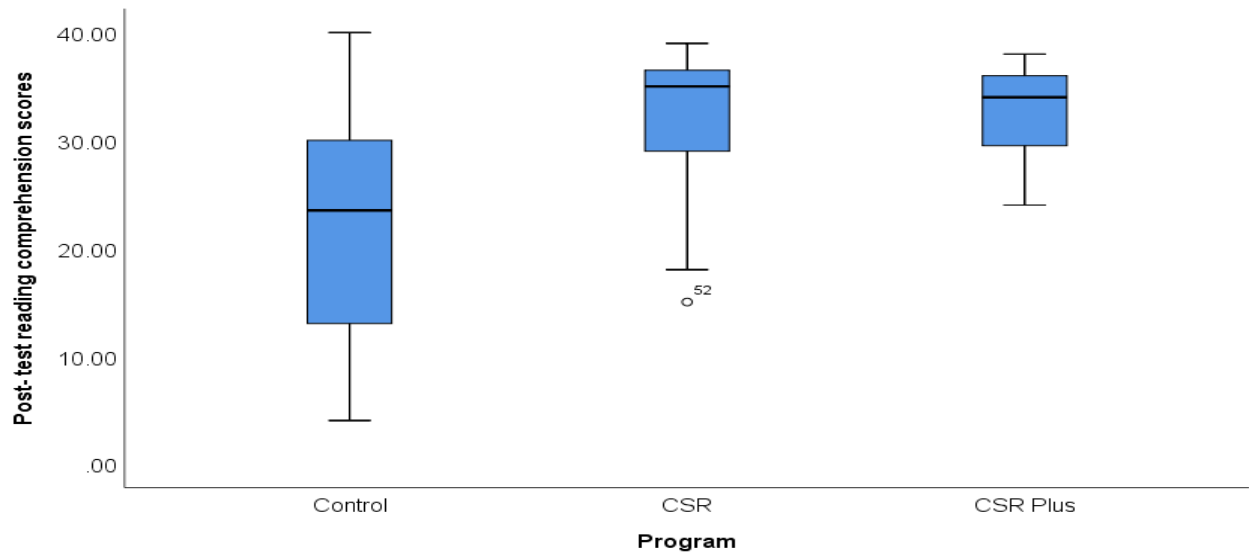
approximately equal. Therefore, it was considered justifiable to run the two-way mixed ANOVA test regardless of the homogeneity of variances assumption.

Mauchly's test of sphericity: This test determines whether the variance of the difference between the groups is equal. For the purpose of the present study, it is not important to check for this assumption because the within-subjects factor (time) has only two levels which are pre-test and post-test.

Box's test of equality of covariance matrices: It tests the null hypothesis that covariance matrices are equal across the different groups ($p > .001$). A homogeneity of covariance matrices test was run and the results showed that this assumption was violated ($p < .001$).

It is difficult to deal with violations of homogeneity of covariance matrices. One solution is to carry out the mixed ANOVA regardless of the violation of the assumption (Laerd Statistics, 2015). This solution was adopted in the present study, and the violation of the assumption needed to be borne in mind when interpreting the results.

Lack of outliers in the data set: Another assumption for running ANOVA is that there should be no outliers (A. Field, 2017; Larson-Hall, 2016). This was checked in the present study and boxplots were created. On the one hand, it was found that there were three outliers for the CSR Plus group in their pre-test reading comprehension scores. No outliers were detected for the Control and the CSR group. On the other hand, no existing outliers were found for the post-test reading comprehension scores, except one for the CSR group (See Figures 4.1 and Figure 4.2).

Figure 4.1*Boxplot for Pre-test Reading Comprehension Scores***Figure 4.2***Boxplot for Post-test Reading Comprehension Scores.*

In the present study, the researcher decided to run analyses both with and without the outliers, then results were compared. One reason was that if the outliers were removed from the data, there was a possibility for other outliers to appear as claimed by Larson-Hall (2010, p. 91), “Sometimes one outlier may mask another, so that when you throw away one data point you then find another that stands out, and where do you stop?”. Thus, Larson-Hall suggested reporting results of both analyses with and without the outliers.

Accordingly, because the primary purpose of the present study was to examine whether there were differences between participants’ achievement scores across groups and over time, the two-way mixed ANOVA was still used regardless of the violation of the assumptions. After checking for all assumptions, the two-way mixed ANOVA was undertaken. Results are provided in the following sections with reporting first findings without removing the outliers then those without the outliers.

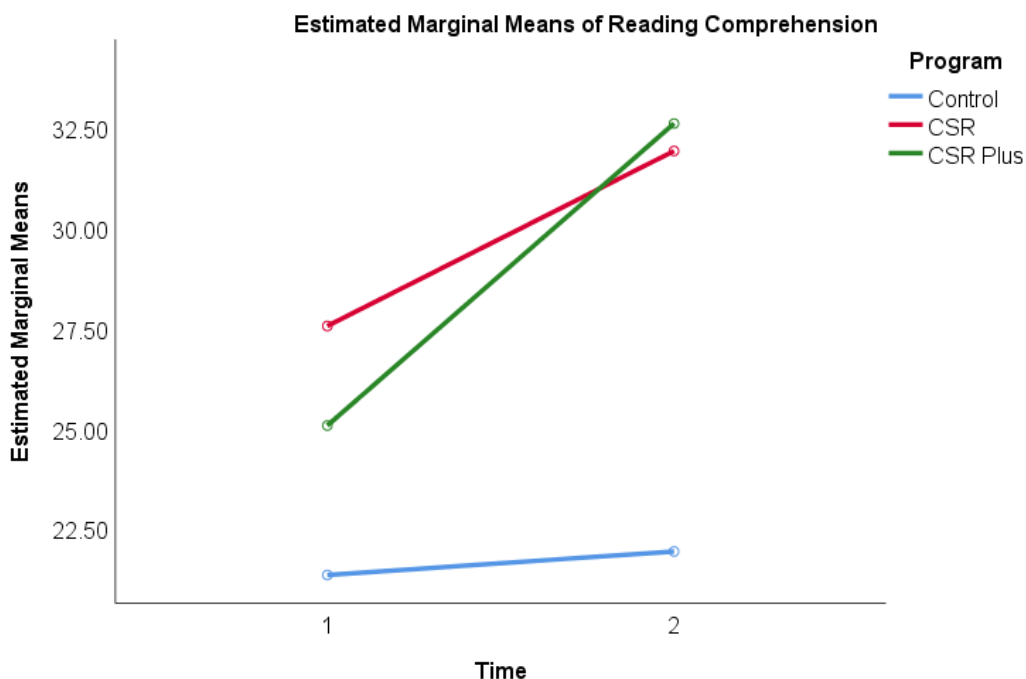
In order to examine the effect of the instruction on students’ reading comprehension performance, the two-way mixed ANOVA test was undertaken with reading comprehension pre-test and post-test scores as the within subject variable, and the three groups (Control, CSR, and CSR Plus) as the between subjects variable. Results revealed a main effect of time, $F(1,101) = 48.83$, $p < .001$, $\eta_p^2 = .37$, as well as a main effect of program, $F(2,101) = 13.15$, $p = .006$, $\eta_p^2 = .097$. A statistically significant time *program interaction on reading comprehension scores was also detected, $F(2,101) = 11.30$, $p < .001$, $\eta_p^2 = .183$, however, in order to investigate this interaction further, Bonferroni tests were run using syntax in SPSS. The effect size magnitudes for partial eta squared η_p^2 , Cohen’s d , and r reported in the present study are: Small: $\eta_p^2 = .01$, $d = .20$, $r = .10$. Medium: $\eta_p^2 = .06$, $d = .50$, $r = .30$. Large: $\eta_p^2 = .14$, $d = .80$, $r = .50$ (Larson-Hall, 2010).

At pre-test, there was a significant difference between the Control group and the CSR group in their reading comprehension scores, $p=.004$, $d=.6$, a non-significant difference between the CSR Plus and the Control group, $p=.155$, and between the CSR and the CSR Plus group, $p=.568$. That is, the CSR group significantly outperformed the Control group in their reading comprehension scores at pre-test. For the difference between the Control and the CSR Plus group, as well as between the CSR and the CSR Plus, results showed that the CSR Plus group performed better than the Control group, and the CSR group was better than the CSR Plus group, but at a non-statistically significant level.

At post-test, the CSR and the CSR Plus group significantly outperformed the Control group in their reading comprehension scores with a large effect size, $p<.001$, $d=.9$, and $d=.9$ respectively, whereas, the CSR and the CSR Plus did not differ significantly, $p=1.00$. Additionally, because there was a main effect of time, pairwise comparisons using Bonferroni post hoc tests were run. Analysis showed that the Control group did not make improvement from the pre-test to post-test, $p=.607$, but both CSR and CSR Plus groups significantly improved their reading comprehension scores, $p<.001$, $d=.8$ and $d=1.00$ respectively. Details of reading comprehension scores for the three groups at both the pre-test and post-test are shown in Figure 4.3 below.

Figure 4.3

Students' Reading Comprehension Scores at Pre-test and Post-test



Another two-way ANOVA test was run without the outliers detected at pre-test and post-test reading comprehension scores. Analysis showed that there was a main effect of time, $F(1,97) = 44.76, p < .001, \eta_p^2 = .31$, and program, $F(2,97) = 16.22, p < .001, \eta_p^2 = .25$, as well as time*program interaction, $F(2,97) = 8.91, p < .001, \eta_p^2 = .15$. However, slightly different results were obtained when running post-hoc comparisons. That is, using Bonferroni correction, findings showed that the CSR and the CSR Plus were significantly better than the Control group in their pre-test reading comprehension scores ($p = .002, d = .8$, and $p = .015, d = .7$ respectively), as opposed to results with outliers which showed that only the CSR group achieved significantly higher than the Control group. For differences between the CSR and the CSR Plus, the same results were obtained as those when keeping the outliers. For the post-test reading comprehension scores, between groups differences were the same as obtained for the ANOVA conducted with outliers retained.

Since a number of assumptions of the two-way ANOVA were violated in the present study, the researcher decided to also run non-parametric tests including the Kruskal-Wallis test, the Mann-Whitney U-test and Wilcoxon Signed Ranks test. The aim behind conducting the non-parametric test was to use them to test the trustworthiness of results obtained through ANOVA.

First, the Kruskal-Wallis test was run to detect any differences between the groups at both pre-test and post-test, as a non-parametric alternative to the parametric one-way ANOVA. In reporting the findings of the non-parametric test run in the present study, the medians were generated instead of the means as suggested by Pallant (2016, p. 229) “When presenting your results, however, it would be better to report the median values for each group” (p. 229).

In terms of reading comprehension scores at pre-test, results of the Kruskal-Wallis test indicated that there was a statistically significant difference in students’ scores, $\chi^2(2) = 7.86$, $p = .020$, and at post-test, $\chi^2(2) = 20.70$, $p < .001$. Therefore, the Mann-Whitney U test as a post hoc test was run on reading comprehension gain scores. Details of the Mann-Whitney U test for reading comprehension gain scores are outlined in Table 4.4, showing that there were only significant differences between the Control and the two Intervention groups, yet no differences between the two Intervention groups. Additionally, changes between pre and post-test reading comprehension scores (Table 4.5 below) were explored for each group, using a Wilcoxon Signed Ranks test, which showed that statistically significant change occurred only in the CSR and the CSR Plus groups.

Table 4.4

The Mann-Whitney U Test Results for the Reading Comprehension Gain Scores

Group	Reading comprehension gain scores			
	<i>U</i>	<i>z</i>	<i>p</i>	<i>r</i>
Control (<i>Mdn</i> =1.00)	374.50	-2.66	.008*	-.32
CSR (<i>Mdn</i> =4.00)				
Control (<i>Mdn</i> =1.00)	189.50	-4.88	.000*	-.59
CSR Plus (<i>Mdn</i> =7.00)				
CSR (<i>Mdn</i> =4.00)	425.00	-2.21	.027	/
CSR Plus (<i>Mdn</i> = 7.00)				

* *Significant at .016*

/No value for r because p is non-significant

Table 4.5

Wilcoxon Signed Ranks Test for the Reading comprehension scores

Group	Reading comprehension scores	Wilcoxon Signed Ranks Test		
		<i>z</i>	<i>p</i>	<i>r</i>
Control	Pre-test (<i>Mdn</i> =22.50)	-1.63	.103	/
	Post-test (<i>Mdn</i> = 23.50)			
CSR	Pre-test (<i>Mdn</i> =29.00)	-3.88	*.000	.46
	Post-test (<i>Mdn</i> = 35.00)			
CSR Plus	Pre-test (<i>Mdn</i> =27.00)	-4.91	*.000	.41
	Post-test (<i>Mdn</i> = 32.00)			

**Significant at .05*

/No value for r because p is non-significant

Furthermore, since students' reading comprehension scores were significantly different at pre-test, ANCOVA test was run with these scores as a covariate. According to Abbott (2017), "If the researcher cannot truly randomize in the study, ANCOVA might be helpful as a way of limiting the influence of a variable or variables "outside" the design (known as "covariates") that might affect the results" (p. 298). Thus, since the researcher was not able to randomly select the groups, this might be a limitation and hence students' pre-test scores were entered as a covariate.

After adjustment for pre-test reading comprehension scores, there was a statistically significant difference in post-test reading comprehension scores between the groups, $F(2, 100) = 18.24, p < .001, \eta_p^2 = .267$. Bonferroni post hoc tests were run to determine where the differences lay. Analyses indicated that the post-test reading comprehension scores for the CSR and the CSR Plus groups were significantly better than the Control group, with a large effect size ($p < .001, d = 1.00$ and $d = 1.44$ respectively). However, no significant differences were detected between the CSR and the CSR Plus group ($p = .237$) with the CSR Plus outperforming the CSR group. In other words, the two-way ANOVA results were confirmed when students' pre-test reading comprehension scores were entered as a covariate.

In summary, the different analyses conducted all showed that the CSR and the CSR Plus group made greater pre- post-test improvement than the Control group did. Additionally, the CSR and the CSR Plus groups had higher reading comprehension scores than the Control group from the very beginning, a limitation which is addressed in the Discussion chapter. Moreover, similar results were obtained when running the non-parametric tests to compare those of the two-way ANOVA, as well as when time 1 reading comprehension scores were used as a covariate.

4.2.2.2 The Effect of the Instruction on Students' Self-Efficacy Perceptions. As regards the impact of the intervention on students' levels of self-efficacy, pre-test and post-test scores were generated using descriptives. Table 4.6 below summarizes minimum, maximum, mean, and standard deviation of students' self-efficacy scores at both pre-test and post-test.

Table 4.6

Descriptive Statistics for Students' Pre-test and Post-test Self-Efficacy Scores (out of 100)

Group	Pre-test				Post-test			
	Min	Max	Mean	SD	Min	Max	Mean	SD
Control	4.62	90.77	52.60	21.13	9.23	91.54	55.58	19.26
CSR	10.0	93.85	61.19	19.84	48.46	100.00	74.75	14.36
CSR Plus	8.46	90.77	59.14	20.86	61.54	99.23	85.16	10.82
Total	4.62	93.85	57.69	20.74	9.23	100.00	71.99	19.39

Table 4.6 above on students' pre-test and post-test self-efficacy scores shows that there was a 14.29 gain score from the pre-test to post-test for the three groups combined. The Control group gain score was 2.97, whereas the gain scores for the CSR and CSR Plus were 13.56 and 26.02 respectively. Therefore, it can be noted that the Control group made only a slight change compared to the two Intervention groups in which scores improvement was high. Additionally, at post-test, the SD for the intervention groups decreased quite a lot, suggesting that the treatment reduced the variability in learners' self-efficacy scores.

Overall, self-efficacy descriptives indicated that there was an increase in students' scores from the pre-test to post-test phase of the intervention. In order to investigate these differences

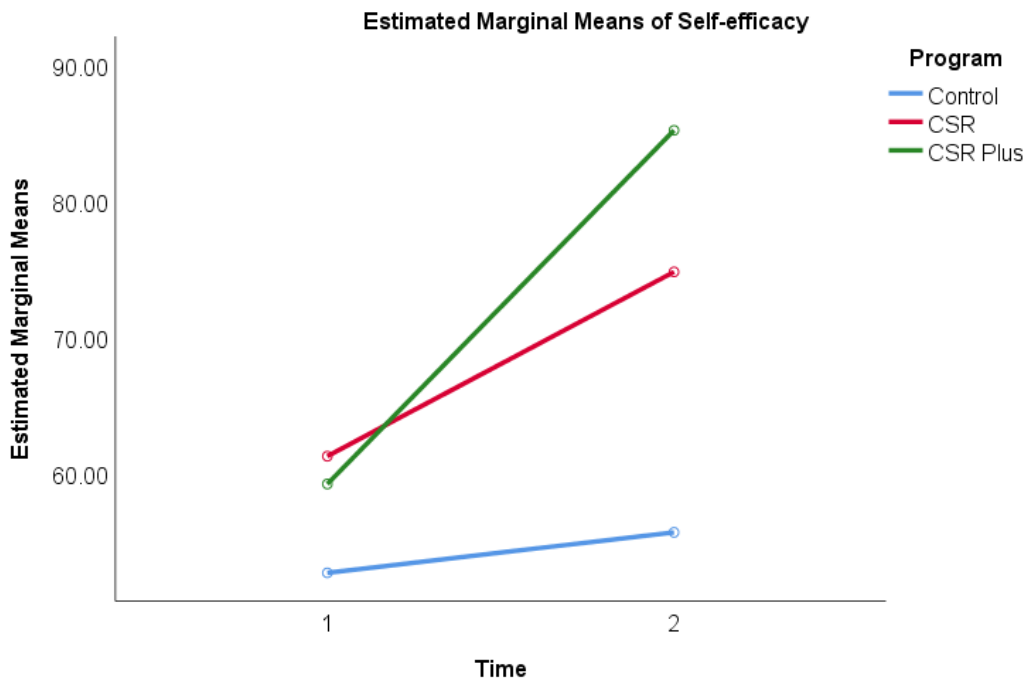
further, the results of the two-way mixed ANOVA are provided. As discussed in Section 4.2.2.1, assumptions were checked and some were violated, but the ANOVA was still used for the reasons provided above.

Findings of the two-way mixed ANOVA with one within-subjects factor (time: pre-test, post-test) and one between-subjects factor (program: Control, CSR, CSR Plus) revealed a main effect of time, $F(1,101) = 69.09, p < .001, \eta_p^2 = .406$, as well as program, $F(2,101) = 12.20, p < .001, \eta_p^2 = .195$. Analysis showed also a significant time*program interaction, $F(2,101) = 15.16, p < .001, \eta_p^2 = .231$, meaning that the instruction influenced participants' self-efficacy levels in the three groups differently (Figure 4.4).

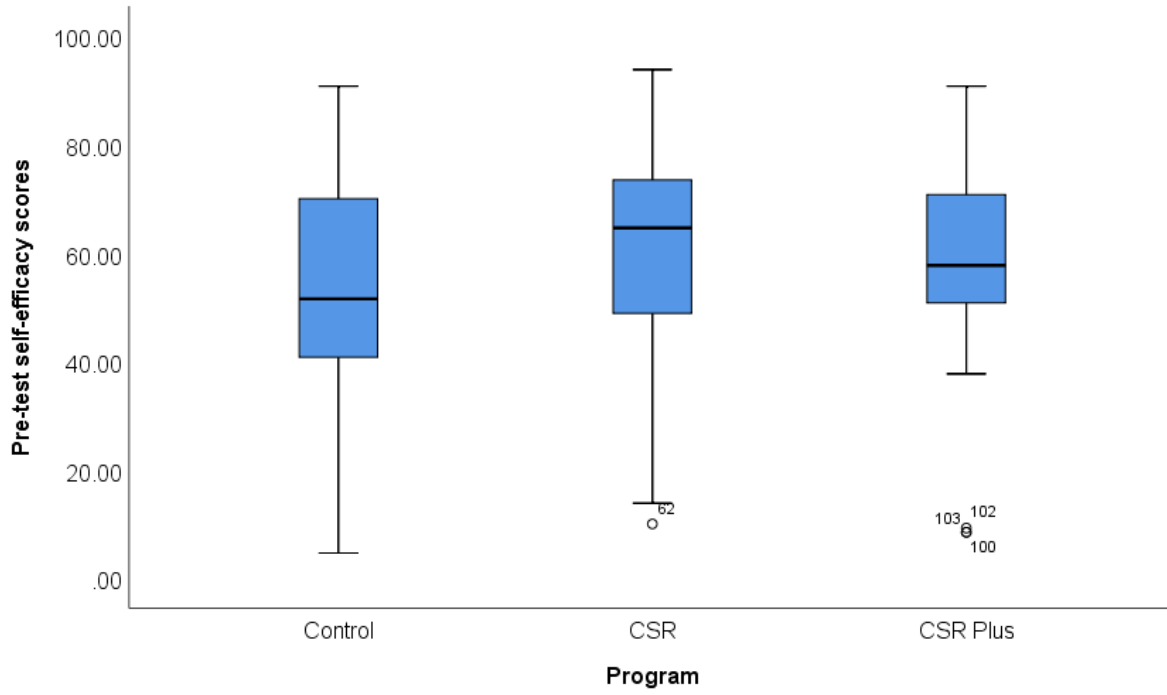
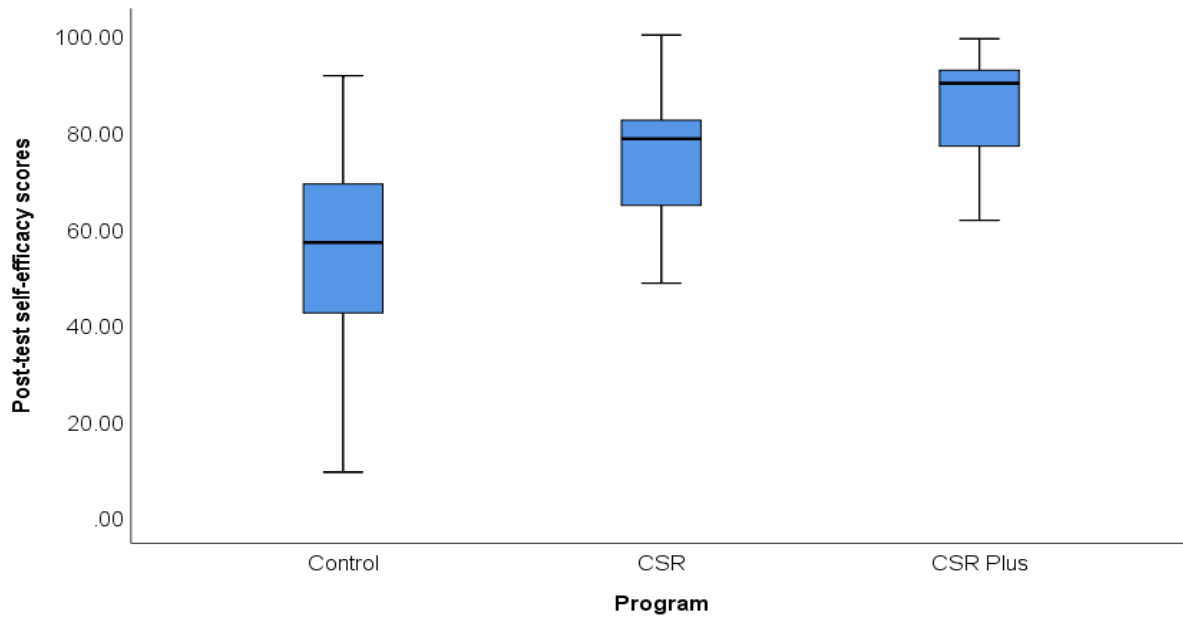
In order to investigate this interaction further, post hoc tests with Bonferroni correction were undertaken using syntax. The levels of self-efficacy did not differ significantly between groups at pre-test, $p = .202$, but there was a significant difference at post-test, $p < .001$. The CSR group differed significantly from the Control group at post-test, $p < .001, d = 1.00$. The same was true for the difference between the CSR and the Control group with a very large effect size, $p < .001, d = 1.53$, and between the CSR and the CSR Plus group $p = .015, d = .7$. For the main effect of time, pairwise comparisons using Bonferroni post hoc tests indicated that while the Control group's self-efficacy scores did not increase significantly from the pre-test to post-test, $p = .322$, those of the CSR and the CSR Plus did, $p < .001$, with large effect sizes, $d = .7$ and $d = 1.2$ respectively.

Figure 4.4

Students' Self-Efficacy Scores at Pre-test and Post-test



Since there were outliers for the pre-test self-efficacy scores for the Intervention groups (Figures 4.5 and 4.6), analyses were run again by removing the outliers and comparisons were made. Compared to the results with keeping the outliers, these results were slightly different. While previous analysis indicated that the three groups did not differ in their self-efficacy scores at pre-test, the analysis without outliers showed that the CSR Plus group had significantly higher self-efficacy scores than the Control group ($p=.04$, $d=.61$). At post-test, the results from the analysis without outliers were the same as the analysis with outliers.

Figure 4.5*Boxplot for Pre-test Self-Efficacy Scores***Figure 4.6***Boxplot for Post-test Self-Efficacy Score*

The non-parametric Kruskal-Wallis, Mann-Whitney U-test and the Wilcoxon Signed Ranks tests were run with the self-efficacy scores to check the trustworthiness of results obtained through ANOVA. The Kruskal-Wallis test was first run to detect any differences between the groups at both pre-test and post-test. Results of the test indicated that the three groups did not differ significantly in their pre-test self-efficacy scores, $\chi^2(2) = 3.845, p = .146$. However, there was a statistically significant difference at post-test scores, $\chi^2(2) = 39.730, p < .001$. In order to examine this difference further, post hoc test using the Mann Whitney U test were undertaken. Results are summarised in Table 4.7 below, showing that there were significant differences between the Control and the two Intervention groups, as well as between the two Intervention groups. These findings are in line with the previous results when running the parametric ANOVA test.

Table 4.7

The Mann-Whitney U Test Results for the Self-Efficacy Scores

Group	Post-test self-efficacy scores			
	<i>U</i>	<i>z</i>	<i>p</i>	<i>r</i>
Control (<i>Mdn</i> =56.92)	258.00	-4.05	.000*	-.49
CSR (<i>Mdn</i> =78.46)				
Control (<i>Mdn</i> =56.92)	103.50	-5.90	.000*	-.71
CSR Plus (<i>Mdn</i> =90.00)				
CSR (<i>Mdn</i> =78.46)	362.00	-2.94	.003*	-.35
CSR Plus (<i>Mdn</i> = 90.00)				

* Significant at .016

For the self-efficacy scores changes between the pre and post-test, the Wilcoxon Signed Ranks test was run (Table 4.8). Results showed that the significant pre to post-test change occurred only in the CSR and the CSR Plus groups, which was also revealed by the parametric ANOVA test.

Table 4.8

Wilcoxon Signed Ranks Test for the Self-Efficacy Scores

Group	Self-efficacy scores	Wilcoxon Signed Ranks Test		
		<i>z</i>	<i>p</i>	<i>r</i>
Control	Pre-test (<i>Mdn</i> =51.54)	-1.19	.235	/
	Post-test (<i>Mdn</i> = 56.92)			
CSR	Pre-test (<i>Mdn</i> =64.61)	-3.92	*.000	.47
	Post-test (<i>Mdn</i> = 78.46)			
CSR Plus	Pre-test (<i>Mdn</i> =57.69)	-5.09	*.000	.61
	Post-test (<i>Mdn</i> = 90.00)			

*Significant at .05

/No value for *r* because *p* is non-significant

For the reason that there was a pre-existing difference between the groups, ANCOVA test was run with pre-test self-efficacy scores as a covariate. The same results were obtained as for the previous ANOVA. That is, after adjustment for pre-test self-efficacy scores, there was a statistically significant difference in post-test self-efficacy scores between the groups, $F(2, 100) = 38.78$, $p < .001$, $\eta_p^2 = .437$. Bonferroni post hoc tests were run to determine where the differences lay. Analyses indicated that there was a significant difference between the Control and the CSR group groups ($p < .001$, $d = .9$), and between the Control and the CSR Plus group ($p < .001$, $d = 1.76$), as well as

between the CSR and the CSR Plus groups ($p=.001$, $d=.9$). Consequently, the impact of the instruction was beneficial for the CSR and the CSR Plus group, mainly for the CSR Plus group who significantly increased their sense of self-efficacy and was better than the CSR and the Control group.

After examining the level of reading comprehension and self-efficacy across groups before and after the intervention, the association between the two constructs was investigated. As discussed in the normality analysis section (Section 4.2.1), reading comprehension and self-efficacy scores were shown to be non-normally distributed, thus the non-parametric correlation test Spearman's rank order correlation was used. Results of the Spearman's rank order correlation test are shown in Table 4.9 below.

Table 4.9

Spearman's Correlation between Self-Efficacy Scores and Reading Comprehension Scores

Group	Pre-test		Post -test	
	<i>r</i>	<i>sig</i>	<i>r</i>	<i>sig</i>
Control	.414*	.015	.508**	.002
CSR	.368*	.030	.103	.562
CSR Plus	.364	.592	.144	.418
Total	.438**	.000	.491**	.000

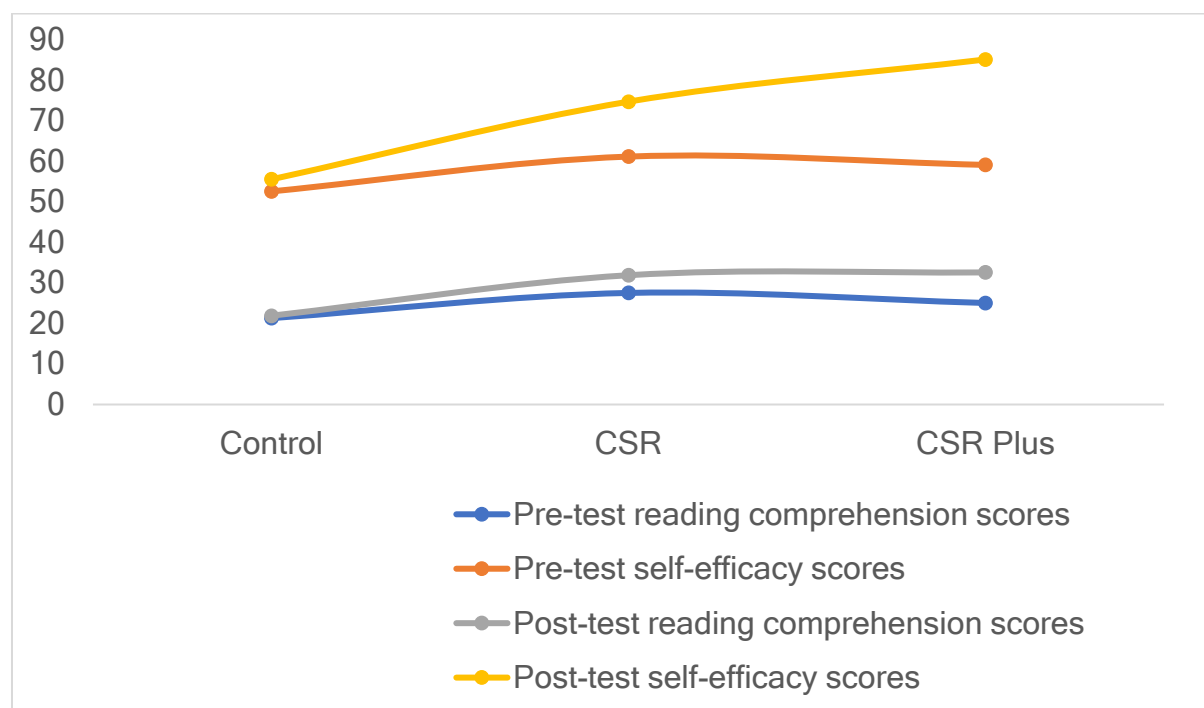
*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Correlation analysis revealed that there were medium to strong positive correlations between participants' reading comprehension and self-efficacy levels for the Control and CSR group at pre-test. Table 4.9 indicates that for the sample as a whole (Control, CSR, and CSR Plus) there was an increase in the correlation between self-efficacy and reading comprehension from the pre-test to post-test; the same was true for the Control group who also showed an increase at post-test. By contrast, both CSR and CSR Plus reading comprehension and self-efficacy correlations decreased, and for the CSR Plus group, the correlation was never significant. In other words, although students in the CSR and the CSR Plus groups increased their reading comprehension performance at post-test, they did not show a similar increase in their self-efficacy levels from the pre-test to post-test; a surprising finding which is considered in more detail in the Discussion chapter.

Figure 4.7

Line Graphs for Correlation between Reading Comprehension and Self-Efficacy Scores



In order to further investigate whether reading comprehension or self-efficacy scores increased more, line graphs were created. That is, as the reading comprehension and self-efficacy scores used different scales, the reading comprehension mean scores were converted to percentage scores and then were plotted against the self-efficacy scores, which were already out of 100%. As illustrated in Figure 4.7 above, it seemed that the Control group made no progress really on either reading comprehension or self-efficacy between pre and post-test, which were also very similar to one another, hence the significant correlations at both time points. For the CSR group, at both time points, reading comprehension scores were higher than self-efficacy. By contrast, self-efficacy improved more than reading comprehension did for the CSR Plus group, to quite a large extent (hence the lack of significant correlation at post-test).

4.2.2.3 The Impact of the Intervention on Students' Success and Failure Causal

Attributions. Part of the first research question addressed in the present study was to examine the extent to which the instruction modified students' causal attributions in the reading comprehension activities. The English Reading Questionnaire was implemented in the present study to gather insights into students' reasons for their successful and unsuccessful achievements in reading comprehension activities. Participants were asked to circle a number from 1 (strongly disagree) to 6 (strongly agree) and which best matched how they felt about effort, strategy use, ability, task difficulty, luck, grammar and vocabulary, motivation and tiredness, and perseverance as reasons for their failure or success. Scores for each type of attributions were combined and run separately for success and failure attributions.

Since students' attributions were measured at the ordinal level and violated the normality assumption, the non-parametric Kruskal-Wallis test, followed by the Mann-Whitney U-test as a post-hoc test, was used to make comparisons of both success and failure attributions across the three

groups. For within-subjects comparisons, the Wilcoxon Signed Ranks test was used. Analyses were made separately for failure and success attributions, and also for internal and external attributions. That is, for internal attributions, scores for effort, strategy use, ability, perseverance, motivation, and tiredness were combined together then run for success and failure separately. The combined scores for luck, task difficulty, grammar and vocabulary difficulty referred to external factors.

The Kruskal-Wallis test was run in the present study in order to compare students' scores in the three groups, and to examine if there were any significant differences on success and failure attributions across the different groups. The Kruskal-Wallis test was chosen because the data was not normally distributed, and it allows to compare more than two groups (A. Field, 2017; Pallant, 2016). While, "The Friedman test is used when scores are related. The Kruskal –Wallis test assesses the hypothesis that multiple independent groups come from different populations" (A. Field, 2017, p. 306). Therefore, Kruskal- Wallis was selected because the three groups were unrelated as the different participants were exposed to different interventions. Significant Kruskal-Wallis tests were followed by the Mann-Whitney U tests as post hoc analysis for differences between the different groups. For all analysis using the Mann -Whitney U test, a Bonferroni correction at the level of .016 was accepted; the accepted significance level .05 divided by the number of comparisons made (three).

4.2.2.3.1 Success Attributions. Results of the Kruskal-Wallis test indicated that there was no statistically significant difference in internal attributions for success scores between groups at pre-test $\chi^2(2) = 5.01, p = .082$, however, the three groups differed significantly at post-test, $\chi^2(2) = 7.77, p = .021$. For external attributions for success, the Kruskal-Wallis test revealed no significant difference between the groups at pre-test, $\chi^2(2) = .82, p = .663$, and post-test, $\chi^2(2) = 1.30, p = .523$.

Since internal attributions for success differed significantly at post-test, post hoc tests using the Mann Whitney U test were run. Results of the Mann Whitney U test (Table 4.10) revealed that there was a statistically significant difference between the Control group ($Mdn=3.08$) and the CSR group ($Mdn= 2.50$), $p=.006$, $r=-.24$. However, the Control group ($Mdn=3.08$) and the CSR plus group ($Mdn= 3.00$) did not differ significantly, $p=.094$. There was also no significant difference in attributing success to internal factors between the CSR group ($Mdn=2.50$) and the CSR Plus group ($Mdn=3.00$), $p=.131$.

Table 4.10

Mann Whitney U Test Results for Internal Success Attributions at Post-test

Group	Post-test scores			
	<i>U</i>	<i>z</i>	<i>p</i>	<i>r</i>
Control ($Mdn=3.08$)	365.50	-2.76	.006*	-.24
CSR ($Mdn=2.50$)				
Control ($Mdn=3.08$)	456.00	-1.67	.094	/
CSR Plus ($Mdn=2.66$)				
CSR ($Mdn=2.50$)	484.50	-1.51	.131	/
CSR Plus ($Mdn= 3.00$)				

* *Significant at .016*

/No value for r because p is non-significant

With regards to the external attributions for success, there was no difference between the groups at either pre-test or post-test as shown by the Kruskal-Wallis test. Therefore, no post-hoc test using the Mann-Whitney U-test were undertaken. Changes in participants' attributions across the

three groups were further analysed using the Wilcoxon-Signed Ranks test. As shown in Table 4.11, the only significant pre to post-test change occurred in the Control group, whose external attributions for success significantly decreased.

Table 4.11

Wilcoxon Signed Ranks Test for Internal and External Success Attributions

Group	Internal attributions for success	Wilcoxon Signed Ranks Test		
		<i>z</i>	<i>p</i>	<i>r</i>
Control	Pre-test (<i>Mdn</i> =3.00)	1.03	.302	/
	Post-test (<i>Mdn</i> = 3.08)			
CSR	Pre-test (<i>Mdn</i> =2.66)	1.03	.134	/
	Post-test (<i>Mdn</i> = 2.50)			
CSR Plus	Pre-test (<i>Mdn</i> =2.66)	1.44	.150	/
	Post-test (<i>Mdn</i> = 3.00)			
Group	External attributions for success	Wilcoxon Signed Ranks Test		
		<i>z</i>	<i>p</i>	<i>r</i>
Control	Pre-test (<i>Mdn</i> =3.87)	2.74	*.006	.33
	Post-test (<i>Mdn</i> = 2.87)			
CSR	Pre-test (<i>Mdn</i> =3.75)	.65	.513	/
	Post-test (<i>Mdn</i> =3.50)			
CSR Plus	Pre-test (<i>Mdn</i> =3.25)	.96	.339	/
	Post-test (<i>Mdn</i> =3.50)			

* *Significant at .05*

/No value for r because p is non-significant

4.2.2.3.2 Failure Attributions. In terms of internal attributions for failure at pre-test, results of the Kruskal-Wallis test indicated that there was a statistically significant difference in students' scores across the three groups, $\chi^2(2) = 7.05, p = .029$, and at post-test, $\chi^2(2) = 7.05, p = .029$. Similarly, there was a significant difference between the Control group, the CSR group, and the CSR Plus group in their external attributions for failure at pre-test, $\chi^2(2) = 6.98, p = .030$, and post-test $\chi^2(2) = 6.98, p = .030$.

Since internal attributions for failure at pre-test were significantly different, the Mann-Whitney U test was run on students' gain scores; the difference between post-test and pre-test scores), revealing a non-significant difference between the Control group ($Mdn = .000$), and the CSR group ($Mdn = .000$), $p = 1.00$ and between the CSR group ($Mdn = .000$), and the CSR Plus group ($Mdn = .000$), $p = 1.00$. The same was true for the Control group ($Mdn = .000$), and the CSR Plus group ($Mdn = .000$), $p = 1.00$. These results revealed that students' internal attributions for failure were similar, and that they did not change between the pre and post-test across the Control and the two Intervention groups.

Regarding the external attributions for failure, the Mann Whitney U test was run also on gain scores because the three groups were different at pre-test. Details on the Mann Whitney U test for external attributions for failure are outlined in Table 4.12, showing that there were no significant differences between the groups. The same was true for changes between pre and post-test for internal and external failure attributions (Table 4.13), none of which were statistically significant.

Table 4.12*Mann Whitney U Test on External Attributions for Failure Gain Scores*

Group	Gain scores			
	<i>U</i>	<i>z</i>	<i>p</i>	<i>r</i>
Control (<i>Mdn</i> =0.00)	595.00	.00	1.00	/
CSR (<i>Mdn</i> =0.00)				
Control (<i>Mdn</i> =0.00)	595.00	.00	1.00	/
CSR Plus (<i>Mdn</i> =0.00)				
CSR (<i>Mdn</i> =0.00)	612.50	.00	1.00	/
CSR Plus (<i>Mdn</i> = .00)				

/ No value for *r* because *p* is non-significant**Table 4.13***Wilcoxon Signed Ranks Test for Internal and External Failure Attributions*

Group	Internal attributions for failure	Wilcoxon Signed Ranks Test		
		<i>z</i>	<i>p</i>	<i>r</i>
Control	Pre-test (<i>Mdn</i> =3.16)	.00	1.00	/
	Post-test (<i>Mdn</i> = 3.16)			
CSR	Pre-test (<i>Mdn</i> =2.66)	.00	1.00	/
	Post-test (<i>Mdn</i> = 2.66)			
CSR Plus	Pre-test (<i>Mdn</i> =3.50)	.00	1.00	/
	Post-test (<i>Mdn</i> = 3.50)			
Group	External attributions for failure	Wilcoxon Signed Ranks Test		
		<i>z</i>	<i>p</i>	<i>r</i>
Control	Pre-test (<i>Mdn</i> =3.25)	.00	1.00	/
	Post-test (<i>Mdn</i> = 3.25)			

CSR	Pre-test (<i>Mdn</i> =4.50)	.00	1.00	/
	Post-test (<i>Mdn</i> =4.50)			
CSR Plus	Pre-test (<i>Mdn</i> =3.75)	.00	1.00	/
	Post-test (<i>Mdn</i> =3.75)			

/No value for r because p is non-significant

Overall, the only significant differences observed in students' attributions were at post-test between the Control and the CSR group on internal attributions for success with higher levels for the Control group. Furthermore, the Control group alone showed a change in attributions over time, becoming less likely to attribute success to external causes. A surprising finding which is considered further in the Discussion chapter.

4.2.2.3.3 Strategy Use Attributions. The CSR Plus group alone received an additional treatment (attributional feedback on strategy use and reading comprehension performance). The aim of this enhanced treatment was to help the participants attribute their success and failure to strategy use, a more adaptive form of attributions compared with other internal or external factors.

Changes in students' strategy use attributions between the pre-test and post-test across the three intervention groups were generated. Statements 14.2, and 15.2 respectively in the English Reading Questionnaire asked students to circle a number from 1 (strongly disagree) to 6 (strongly agree) which best matched how they felt about strategy use as a reason for their failure (statement 14.2) and success (statement 15.2). Students' responses were compared across groups and between the pre-test and post-test. Analyses of attributing success and failure to strategy use were undertaken separately. Table 4.14 provides descriptive statistics for students' strategy use attributions at pre-test and post-test.

Table 4.14*Strategy Use Failure and Success Attributions Descriptive Statistics*

Failure strategy use attribution	Pre-test				Post-test				
	Group	Min	Max	Mean	SD	Min	Max	Mean	SD
Control		1.00	6.00	3.35	1.61	1.00	6.00	3.18	1.28
CSR		1.00	6.00	3.88	2.02	1.00	6.00	3.29	1.90
CSR Plus		1.00	6.00	3.88	2.02	1.00	6.00	4.82	1.49
Total		1.00	6.00	3.70	1.88	1.00	6.00	3.76	1.56

Success strategy use attribution	Pre-test				Post-test				
	Group	Min	Max	Mean	SD	Min	Max	Mean	SD
Control		1.00	6.00	2.82	1.22	1.00	6.00	3.23	1.16
CSR		1.00	6.00	2.77	1.37	1.00	6.00	2.40	1.35
CSR Plus		1.00	6.00	1.83	1.12	1.00	6.00	3.08	1.27
Total		1.00	6.00	2.47	1.24	1.00	6.00	2.90	1.26

There was an increase in attributing failure to strategy use in the CSR Plus group from the pre-test to post-test, whereas, the Control and the CSR group did not show improvement. The Control and the CSR Plus group, but not the CSR group, increased their success strategy attributions at post-test. Moreover, from Table 4.14 above it can be noted that participants attributed their failure to strategy use more than they attributed their success to that factor.

Table 4.15*Normality Distribution for Students' Strategy Use Attribution*

		Shapiro-Wilk		
		Statistic	df	Sig.
Strategy use attribution				
Pre-test failure strategy use attribution	Control	.935	34	.045
	CSR	.862	35	.000
	CSR Plus	.789	35	.000
Pre-test success strategy use attribution	Control	.907	34	.007
	CSR	.856	35	.000
	CSR Plus	.723	35	.000
Post-test failure strategy use attribution	Control	.924	34	.021
	CSR	.823	35	.000
	CSR Plus	.938	35	.048
Post-test success strategy use attribution	Control	.908	34	.007
	CSR	.885	35	.002
	CSR Plus	.911	35	.008

As shown in Table 4.15, students' strategy use attributions for success and failure were not normally distributed for the three groups. Thus, the Kruskal-Wallis test was run. Analysis showed that at pre-test, there was a significant difference between the groups in attributing failure to strategy use, $\chi^2(2) = 7.24, p = .027$, and at post-test, $\chi^2(2) = 17.29, p < .001$. Therefore, subsequent analyses used gain scores.

For strategy use success attributions, there was no significant difference between the groups at pre-test, $\chi^2(2) = 2.47, p = .290$, but they differed significantly at post-test, $\chi^2(2) = 18.10, p < 0.001$.

Strategy use attribution differences between the groups and across the pre-test and post-test are summarized in Table 4.16, 4.17, and 4.18 below.

Table 4.16

Mann Whitney U Test on Strategy Use Attributions for Failure

Group	Failure strategy use attributions gain scores			
	<i>U</i>	<i>z</i>	<i>p</i>	<i>r</i>
Control (<i>Mdn</i> =0.00)	539.50	-.71	.479	/
CSR (<i>Mdn</i> =0.00)				
Control (<i>Mdn</i> =0.00)	266.50	-4.03	*<.001	-.5
CSR Plus (<i>Mdn</i> =2.00)				
CSR (<i>Mdn</i> =0.00)	308.00	-3.62	*<.001	-.4
CSR Plus (<i>Mdn</i> = 2.00)				

*Significant at .016

/ No value for *r* because *p* is non-significant

The Mann Whitney U test results outlined in Table 4.16 show that increases in failure strategy use attributions were significantly greater for the CSR Plus group compared to the Control and the CSR groups. For success strategy use attributions at post-test, the Mann Whitney U test analysis showed that the Control group had significantly lower levels than the CSR group and the CSR Plus group. However, the CSR and the CSR Plus group did not differ significantly. Details are provided in Table 4.17 below.

Table 4.17*Mann Whitney U Test on Post-test Strategy Use Attributions for Success*

Group	Success post-test strategy use			
	<i>U</i>	<i>z</i>	<i>p</i>	<i>r</i>
Control (<i>Mdn</i> =1.00)	357.00	-2.94	*.003	-.35
CSR (<i>Mdn</i> =2.00)				
Control (<i>Mdn</i> =1.00)	232.00	-4.49	*<.001	-.54
CSR Plus (<i>Mdn</i> =3.00)				
CSR (<i>Mdn</i> =2.00)	446.50	-2.06	.040	/
CSR Plus (<i>Mdn</i> =3.00)				

* *Significant at .016*/ *No value for r because p is non-significant*

Pre- to post-test changes in strategy use attribution for each group were assessed using the Wilcoxon Signed Ranks test (Table 4.18). As illustrated in the table, no changes occurred for the Control group for either success or failure strategy use attributions. The same was true for the CSR group. By contrast, the CSR Plus group's strategy use failure attributions increased significantly from the pre-test to post-test, as did their strategy use success attributions.

Table 4.18*Wilcoxon Signed Ranks Tests for Strategy Use Attributions*

Group	Strategy use attributions for failure	Wilcoxon Signed Ranks Test		
		<i>z</i>	<i>p</i>	<i>r</i>
Control	Pre-test (<i>Mdn</i> =3.00)	.96	.337	/
	Post-test (<i>Mdn</i> = 3.00)			
CSR	Pre-test (<i>Mdn</i> =4.00)	1.37	.170	/
	Post-test (<i>Mdn</i> = 3.00)			
CSR Plus	Pre-test (<i>Mdn</i> =1.00)	3.12	*.002	.37
	Post-test (<i>Mdn</i> = 6.00)			
Group	Strategy attributions for success	Wilcoxon Signed Ranks Test		
		<i>z</i>	<i>p</i>	<i>r</i>
Control	Pre-test (<i>Mdn</i> =1.00)	2.03	.42	/
	Post-test (<i>Mdn</i> = 1.00)			
CSR	Pre-test (<i>Mdn</i> =2.00)	1.55	.120	/
	Post-test (<i>Mdn</i> =2.00)			
CSR Plus	Pre-test (<i>Mdn</i> =1.00)	3.38	*.001	.40
	Post-test (<i>Mdn</i> =3.00)			

*Significant at .05

/No value for *r* because *p* is non-significant

In summary, in terms of the impact of the instruction on modifying students' attribution for success and failure, and mainly, strategy use attribution, findings revealed that only the CSR Plus group increased their levels of strategy attributions for both success and failure at post-test. That is, compared to the Control and the CSR group, students' in the CSR Plus group linked their success

and failure to strategy use more at post-test compared to the pre-test. A full discussion of this finding is provided in the Discussion chapter.

4.2.3 The Impact of the Intervention by Proficiency Levels on Students' Reading Comprehension Performance and Self-Efficacy Perceptions

In order to address the second research question, ‘Do students of different proficiency levels benefit differently from the CSR and the attributional feedback intervention with regards to their reading comprehension and self-efficacy?’, the whole sample was divided into two proficiency levels (high, and low proficiency) based on their placement test scores (as discussed in the Methodology Chapter). Descriptive statistics including the minimum and the maximum score for each group, the mean, and standard deviation were calculated for the placement test scores (See Table 4.19).

Table 4.19

Students' Placement Test Scores (out of 64)

Group	Scores			
	Min	Max	Mean	SD
Control	10.00	62.00	37.56	14.16
CSR	15.00	60.00	45.51	14.16
CSR Plus	15.00	63.00	47.80	14.08
Total	10.00	63.00	43.68	14.67

The mean score of the CSR Plus group (47.80) was higher than that of the CSR (45.51) and the Control group (37.56). This indicates that the levels of proficiency of the CSR Plus group was higher than that of the two other groups. However, in order to check whether differences between

groups were significant, a one-way ANOVA test was run, then results were compared with results from a Kruskal -Wallis test (as placement test scores were not normally distributed for the CSR and the CSR Plus group). Results of both ANOVA, $F(2,101) = 1.39, p = .254, \eta_p^2 = 0.02$, and the Kruskal -Wallis test, $\chi^2(2) = 2.37, p = .306$ indicated that the Control, the CSR, and the CSR Plus groups did not differ significantly in their placement test scores.

4.2.3.1 Reading Comprehension Scores. In order to investigate if there was an interaction effect between the intervention program and students' proficiency levels on reading comprehension, a 2*2*3 way mixed ANOVA was run with one within-subjects factor (time: pre-test, post-test), and two between -subjects factors (program: Control, CSR, CSR Plus) and (proficiency levels: high, low). Descriptive statistics for students' reading comprehension scores at pre-test and post-test across proficiency levels were generated. As illustrated in Tables 4.20 below, both high and low achieving students in the three groups showed an increase in their reading comprehension scores at post-test.

Table 4.20

Reading Comprehension Scores Descriptive Statistics Based on Proficiency Levels

	Pre-test					Post-test				
	Min	Max	Mean	SD	N	Min	Max	Mean	SD	N
Control										
High	10	39	27.23	8.80	13	5	40	27.38	11.11	13
Low	4	29	17.67	8.79	21	4	38	18.52	9.76	21
	Pre-test					Post-test				
	Min	Max	Mean	SD	N	Min	Max	Mean	SD	N
CSR										
High	16	35	28.65	5.44	20	15	39	33.30	4.92	20
Low	17	33	26.07	5.47	15	18	39	30.07	8.06	15

CSR Plus	Pre-test					Post-test				
	Min	Max	Mean	SD	N	Min	Max	Mean	SD	N
High	13	34	25.23	7.29	17	26	38	33.23	3.61	17
Low	8	34	24.89	8.24	18	24	37	32.00	4.44	18

Results of the 2*2*3 ANOVA indicated a main effect of time, $F(1,98) = 45.456, p < .001, \eta_p^2 = .317$, with post-test reading comprehension scores higher than pre-test scores. There was also a main effect of program, $F(2, 98) = 10.22, p < .001, \eta_p^2 = .173$, as well as a main effect of proficiency, $F(1, 98) = 10.32, p = .002, \eta_p^2 = .095$ (with the high proficiency learners having higher scores than their low proficiency counterparts). Regarding the interaction effects, there was no significant interaction between time and proficiency, $F(1, 98) = .05, p = .821, \eta_p^2 = .001$, or between time, program, and proficiency, $F(2, 98) = .160, p = .852, \eta_p^2 = .003$. There was a significant interaction for time * program, $F(2, 98) = 10.97, p < .001, \eta_p^2 = .183$, and for program * proficiency levels, $F(2, 98) = 3.50, p = .034, \eta_p^2 = .067$.

Post-hoc tests with Bonferroni correction were conducted to further investigate the interaction effects. For the time* program interaction, results have been already reported in the two-way mixed ANOVA for reading comprehension in Section 4.2.2.1. For the program*proficiency levels interaction, post-hoc tests revealed that reading comprehension scores for the high proficiency students across the three groups did not differ significantly, $p > .05$. By contrast, for the low proficiency participants, there was a significant difference between the CSR and the Control group ($p < .001, d = 1.3$), as well as between the CSR Plus and the Control group ($p < .001, d = 1.4$), with large effect sizes. However, the CSR and the CSR Plus did not differ significantly, $p = 1.00$.

In summary, for students as a whole, while the CSR and the CSR Plus group significantly outperformed the Control group in their reading comprehension scores, the two Intervention groups did not differ from each other at post-test. Furthermore, the impact of students' proficiency levels on reading comprehension scores was not significant for the high proficiency students but was significant for the low achieving students. That is, reading comprehension scores for the high proficiency students in the three groups did not differ significantly. By contrast, for the low proficiency participants, there was a significant difference between the Control and the Intervention groups but not between the two Intervention groups. In other words, the effect of the intervention lay primarily within the low proficiency learners. Additionally, for the lack of time * proficiency interaction, this indicated that, in comparison with program*proficiency interaction in which the low proficiency students across Intervention groups significantly outperformed their counterparts in the Control group, the high achieving students across the three groups did not differ in their reading comprehension scores at pre-test and post-test.

4.2.3.2 Self-Efficacy Scores. Descriptive statistics for students' self-efficacy scores at pre-test and post-test across proficiency levels were generated. As illustrated in Tables 4.21 below, both high and low achieving students in the three groups showed an increase in their self-efficacy levels, except for the low proficiency students in the Control group who showed a decrease of 2.02 in their self-efficacy scores at post-test.

Table 4.21*Self-Efficacy Scores Descriptive Statistics Based on Proficiency Levels*

	Pre-test					Post-test				
	Min	Max	Mean	SD	N	Min	Max	Mean	SD	N
Control										
High	8.54	82.31	50.54	25.36	13	28.46	86.92	61.60	16.74	13
Low	4.62	90.77	53.88	18.60	21	9.23	91.54	51.86	20.14	21
CSR										
High	32.31	93.85	58.38	21.85	20	48.46	96.15	72.23	13.28	20
Low	10.00	91.54	64.92	16.79	15	48.46	100.00	78.10	15.49	15
CSR Plus										
High	9.23	90.00	58.69	18.85	17	61.54	99.23	85.56	11.41	17
Low	8.46	90.77	59.57	23.15	18	70.77	97.69	84.79	10.54	18

A 2*3 *2 ANOVA test was run for self-efficacy scores with one within-subjects effect (time: pre-test, post-test), and two between-subjects effect (program: Control, CSR, CSR Plus) and proficiency levels (high, low). Results indicated a main effect of time, $F(1, 98) = 73.360, p < .001, \eta_p^2 = .428$, with post-test self-efficacy scores higher than pre-test scores. There was also a main effect of program, $F(2, 98) = 11.25, p < .001, \eta_p^2 = .187$, however the main effect of proficiency was not statistically significant, $F(1, 98) = .103, p = .749, \eta_p^2 = .001$. Moreover, for the interaction effect, there was no significant interaction between time and proficiency, $F(1, 98) = 2.24, p = .173, \eta_p^2 = .022$, program and proficiency, $F(2, 98) = .75, p = .477, \eta_p^2 = .015$, or for time, program, and proficiency, F

(2, 98) = 1.31 $p = .274$, $\eta_p^2 = .026$. There was also a significant interaction for time * program, $F(2, 98) = 13.21$, $p < .001$, $\eta_p^2 = .212$, as reported in Section 4.2.2.2.

To sum up, levels of self-efficacy scores for the Intervention groups (as a whole group, not split by proficiency) significantly improved from the pre-test to post-test. In addition, as shown in the analysis, the CSR Plus and the CSR group outperformed the Control group in their post-test self-efficacy scores, and the CSR Plus group's level of self-efficacy was higher than the CSR group at post-test. Moreover, students' self-efficacy levels did not differ significantly by their proficiency level, meaning that the intervention improved self-efficacy scores for learners of both proficiency levels. That is, even if the high proficiency learners' reading comprehension was not improved by the intervention, their self-efficacy was.

4.2.4 Students' Perceptions of the Intervention

Students' perceptions of the intervention were addressed in the last research question (What are the perceptions of Algerian EFL university students of the use of the CSR approach and the attributional feedback in respect of their reading comprehension achievements, self-efficacy perceptions, and causal attributions?) and were investigated in the present study using frequencies and percentages. Below, percentages of 'strongly agree' and 'agree', and 'disagree' and 'strongly disagree' have been collapsed in order to give a clear picture of students' positive and negative views.

4.2.4.1 Perceptions of the CSR Intervention. Students in the CSR and the CSR Plus who received the CSR approach instruction were asked at the end of the project to provide their views on the teaching sessions based on the CSR strategies. An evaluation questionnaire was administered to all participants in the two Intervention groups to generate their positive and negative attitudes

towards the instruction. In other words, students were provided with positive and negative statements about the effectiveness of the instruction and were required to report the extent to which they agreed or disagreed with the statements. They were also asked in the questionnaire about the difficulties they faced when being exposed to the CSR sessions for eight weeks.

4.2.4.1.1 Positive Perceptions of the CSR Intervention. Eight items in the questionnaire measured the extent to which participants agreed with positive statements about the CSR intervention. The results as shown in Table 4.22 indicated that the overall response to the statement about the effectiveness of the CSR instruction was very positive. That is, the majority of participants (81.5% far more than half of respondents) indicated that the CSR was effective and none of them commented that it was not effective. In addition to this, 67.1% and 61.4 % respectively commented that the CSR instruction helped them to improve their skills in differentiating the main idea of a text from the supporting details, as well as dealing with the clunks in different ways. Just over two-thirds of participants said that there was an increase in their motivation to read in English, compared to only one participant who strongly disagreed with the statement.

With regards to the CSR implementation procedures, 46 participants thought that they were more responsible for their own learning when assigned roles. 55.7% of the respondents expressed the belief that they were the focus of the learning process when exposed to the CSR approach. For language skills development, over half of the students reported that their oral and communication skills were improved as a result of the CSR intervention. Likewise, over half indicated that their range of vocabulary had improved after the CSR intervention, whereas very few students (ten) expressed that their range of vocabulary had not improved.

Table 4.22*Positive Perceptions of the CSR Intervention's Frequencies and Percentages*

Statements	Strongly agree	Agree	Partly agree	Slightly disagree	Disagree	Strongly disagree
CSR instruction is an effective method for teaching reading comprehension	44 (62.9%)	13 (18.6%)	7 (10.0%)	6 (8.6%)	0	0
My motivation to read in English has increased after the implementation of the CSR	22 (31.4%)	26 (37.1%)	12 (17.1%)	5 (7.1%)	4 (5.7%)	1 (1.4%)
CSR helps me increase my skills in distinguishing the main idea of a text from the specific details	25 (35.7%)	22 (31.4%)	10 (14.3%)	6 (8.6%)	7 (10%)	0
Being assigned a particular role within the group makes me feel more responsible to take part in the reading activities	26 (37.1 %)	20 (28.6%)	11 (15.7%)	5 (7.1%)	4 (5.7%)	4 (5.7%)
My oral and communication skills have been enhanced through the CSR approach	16 (22.9%)	23 (32.9%)	14 (20%)	8 (11.4%)	4 (5.7%)	4 (5.7%)
CSR instruction helps me use different ways to overcome the meaning of unknown words in the text	24 (34.3%)	19 (27.1%)	9 (12.9%)	10 (14.3%)	7 (10%)	1 (1.4%)
My vocabulary range has improved after the implementation of the CSR instruction	16 (22.9%)	23 (32.9%)	17 (24.3%)	4 (5.7%)	8 (11.4%)	2 (2.9%)
I feel that I am the main focus of the learning process within the CSR	14 (20%)	25 (35.7%)	14 (20%)	6 (8.6%)	6 (8.6%)	4 (5.7%)

4.2.4.1.2 Negative Perceptions of the CSR Intervention. For reading comprehension performance, 11.4% of the participants believed that their reading comprehension performance decreased after working in groups, compared to 7.2% who expressed the view that they could not achieve better results when working with their peers. Only a very small number of those surveyed (two students) reported that the CSR instruction made them feel anxious when working with peers. In the same way, three participants felt that the size of the group made them concentrate less, eight believed that they were not able to write a text summary after receiving the instruction, and seven expressed the view that the CSR strategies were not effective in understanding the reading comprehension passages.

A minority of the participants (six and 11 students respectively) agreed that their grammatical knowledge had not improved, and that their understanding of different reading comprehension passages decreased after the CSR implementation. In response to the question ‘Being assigned a particular role within the group makes me less engaged in group work activities,’ 8.5% of the respondents reported that they agreed with the statement, whereas over half of the participants (60%) disagreed with the statement. Table 4.23 outlines the CSR and the CSR Plus groups’ negative perceptions of the CSR training sessions they received.

Table 4.23*Negative Perceptions of the CSR Intervention's Frequencies and Percentages*

Statements	Strongly disagree	Disagree	Slightly disagree	Partly agree	Agree	Strongly agree
Being assigned a particular role within the group makes me less engaged in group work activities	18 (25.7%)	24 (34.3%)	19 (27.1%)	3 (4.3%)	5 (7.1%)	1 (1.4%)
I feel anxious to undertake reading comprehension tasks after the implementation of CSR instruction	19 (27.5%)	23 (33.3%)	23 (33.3%)	2 (2.9%)	2 (2.9%)	0
The size of the group work within the CSR instruction makes me concentrate less	19 (27.1%)	27 (38.6%)	18 (25.7%)	3 (4.3%)	2 (2.9%)	1 (1.4%)
I cannot achieve better results in reading comprehension tasks when working with my peers	20 (28.6%)	23 (32.9%)	21 (30%)	1 (1.4%)	2 (2.9%)	3 (4.3%)
I'm not skilful enough in writing a text summary after being exposed to the CSR instruction	19 (27.1%)	23 (32.9%)	14 (20%)	4 (5.7%)	6 (8.6%)	3 (4.3%)
Reading strategies learned within the CSR approach are not effective in comprehending a reading passage	22 (31.4%)	21 (30%)	19 (27.1%)	1 (1.4%)	5 (7.1%)	2 (2.9%)

My reading comprehension performance decreases when engaged in group work activities	25 (35.7)	22 (31.4%)	15 (21.4%)	0	4 (5.7%)	4 (5.7%)
My grammatical knowledge has not improved after the implementation of CSR instruction	18 (25.7%)	22 (31.4%)	19 (27.1%)	5 (7.1%)	4 (5.7%)	2 (2.9%)
When I am engaged in group discussions, my understanding of the text decreases	18 (25.7%)	22 (31.4%)	18 (25.7%)	1 (1.4%)	6 (8.6%)	5 (7.1%)

The Kruskal-Wallis test was run on the combined score of students' perceptions in order to determine any differences between the CSR and the CSR Plus perceptions of the CSR instruction. Analysis indicated that the two groups did not differ in their positive perceptions, $\chi^2(1) = .268$, $p = .605$, as well as the negative perceptions, $\chi^2(1) = .515$, $p = .473$.

4.2.4.2 Perceptions of the Attributional Feedback Intervention. Participants in the CSR Plus group received an additional treatment to the CSR intervention which was the attributional feedback on their reading comprehension performance and strategy use. A similar questionnaire to the CSR group with an additional section on attributional feedback was administered to them at the end of the training program to examine their perceptions of the instruction. Both positive and negative views were generated from the CSR Plus students.

4.2.4.2.1 Positive Perceptions of the Attributional Feedback Intervention. In response to the statement 'I liked the feedback', 57.1% of the participants surveyed indicated that they did, compared to six students who did not like it. For the impact of the feedback instruction on their confidence and motivation in reading comprehension, more than two thirds of the participants

agreed that it was effective and helpful in increasing their motivation to read and confidence to undertake different reading activities.

Additionally, 68.6% indicated that the teacher feedback on their strategy use helped them to improve their reading comprehension performance. More than half (54.3%) reported that the teacher's feedback helped them to change their causal attributions for both success and failure. There were nine students who responded that they strongly agreed that the feedback helped them to use the CSR strategies more effectively, compared to one student only who expressed the belief that the feedback did not help them. Of the study sample, 16 students (45%) said that teachers should provide feedback on both performance in reading comprehension and use of reading strategies. Details are presented in the Table 4.24.

Table 4.24

Positive Perceptions of the Feedback Instruction's Frequencies and Percentages

Statements	Strongly agree	Agree	Partly agree	Slightly disagree	Disagree	Strongly disagree
I liked the feedback	14 (40%)	6 (17.1%)	5 (14.3%)	4 (11.4%)	3 (8.6%)	3 (8.6%)
The feedback helped me feel more confident about reading	7 (20%)	9 (25.7%)	10 (28.6%)	3 (8.6%)	6 (17.1%)	0
Feedback on strategy use helped me to increase my reading comprehension performance	4 (11.4%)	10 (28.6%)	10 (28.6%)	4 (11.4%)	6 (17.1%)	1 (2.9%)
Feedback helped me to feel more motivated	7 (20%)	10 (28.6%)	9 (25.7%)	2 (5.7%)	7 (20%)	0

The feedback helped me to use reading strategies more effectively	9 (25.7%)	8 (22.9%)	8 (22.9%)	3 (8.6%)	6 (17.1%)	1 (2.9%)
Feedback on strategy use changed what I feel about the reasons for doing well or not so well	4 (11.4%)	11 (31.4%)	11 (31.4%)	3 (8.6%)	6 (17.1%)	0
Teachers should provide feedback on both their students' performance in reading comprehension and use of reading strategies	8 (22.9%)	8 (22.9%)	8 (22.9%)	4 (11.4%)	6 (17.1%)	1 (2.9%)

4.2.4.2.2 Negative Perceptions of the Attributional Feedback Intervention. Very few respondents (eight) felt that the feedback negatively affected their reading comprehension performance. None of the surveyed participants felt that they were unhappy to receive the feedback, and seven students expressed the view that they were not able to understand the feedback provided.

When the participants were asked about the impact of the feedback on their reading comprehension performance and strategy use, five students reported that it decreased their performance in reading comprehension; four commented that it was not enough to influence their use of the CSR reading strategies. Of the 35 participants who completed the questionnaire, only five students responded that the feedback they received was not enough to influence their reading comprehension, whereas just under half of the participants indicated that it was enough (See Table 4.25).

Table 4.25*Negative Perceptions of the Feedback Instruction's Frequencies and Percentages*

Statements	Strongly disagree	Disagree	Slightly disagree	Partly agree	agree	Strongly agree
The feedback negatively affected my reading comprehension performance	9 (25.7%)	12 (34.3%)	6 (17.1%)	6 (17.0%)	1 (2.9%)	1 (2.9%)
Feedback on performance decreased my performance in reading comprehension tasks	6 (17.1%)	11 (31.4%)	13 (37.1%)	0	3 (8.6%)	2 (5.7%)
The feedback I received was not enough to influence my reading performance	4 (11.4%)	10 (28.6%)	15 (42.9%)	1 (2.9%)	3 (8.6%)	2 (5.7%)
The feedback I received was not enough to influence the use of appropriate reading strategies	7 (20%)	10 (28.6%)	13 (37.1%)	0	4 (14.3%)	0
I was not able to understand the feedback provided by the teacher	10 (28.6%)	7 (20%)	10 (28.6%)	0	3 (8.6%)	4 (14.3%)
I was unhappy to receive feedback	12 (34.3%)	10 (28.6%)	7 (20%)	2 (5.7%)	4 (11.4%)	0

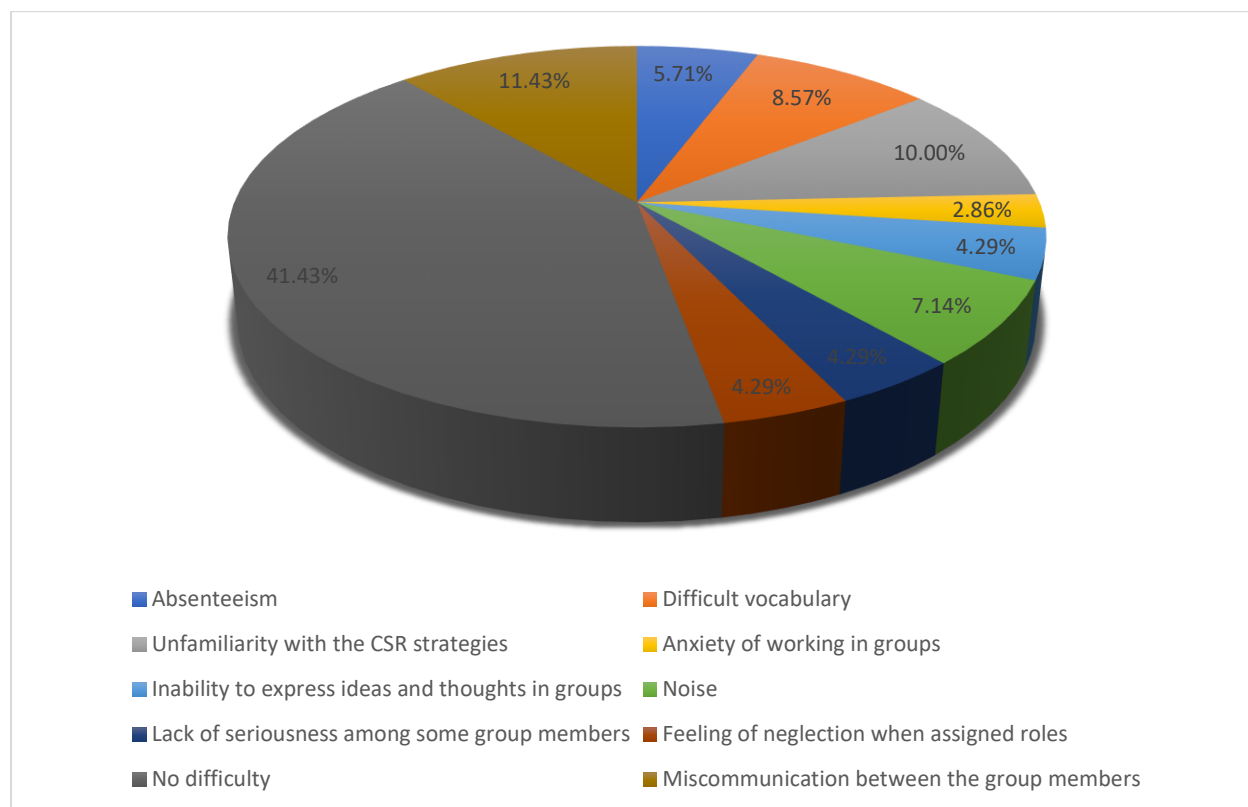
4.2.4.3 Difficulties Faced when Receiving the CSR and the Attributional Feedback

Instruction. In the final part of the questionnaire, students in both groups were asked an open question about the biggest difficulty they faced when they were receiving the instruction. The answers were then coded into different themes and entered into SPSS. Each student's difficulty was

rated on the coded items. Codes were generated by looking at students' responses to the questionnaire, and then creating categories which involved all answers (Figure 4.8). Students' responses were coded by the researcher first, and then by another researcher to check for inter-rater reliability. There was 74% agreement in total between the ratings of the researcher and the other rater. Differences in coding were resolved through discussion.

Figure 4.8

Difficulties Faced when Receiving the Instruction



The pie chart above shows the biggest difficulties faced by the participants in both Intervention groups. The majority of participants stated that they did not face any difficulty (41.43%). For students who reported that they faced difficulties, the main difficulties were the

miscommunication between group members when working collaboratively, unfamiliarity with the CSR approach which represents 11.43% and 10 % of participants respectively. Only a small portion referred to other difficulties such as anxiety to work in groups, engagement in group-work activities, absenteeism and other factors as indicated in Figure 4.8.

Taken together, findings of the evaluation questionnaire revealed a positive attitude towards the CSR and the attributional feedback intervention. For the CSR intervention, more than half of the participants agreed that the instruction was effective in improving their reading comprehension performance, whereas, none of the respondents disagreed with that. In the same way, the majority of participants (67.1%) disagreed that the CSR intervention decreased their levels of reading comprehension performance. Students surveyed in the CSR Plus group expressed the belief that the attributional feedback instruction did not decrease their reading comprehension performance (27 students). Similarly, only one student believed that the feedback had a negative impact on their reading comprehension performance.

For the difficulties faced while being exposed to the intervention, data gathered from the questionnaire indicated that only a few students referred to some difficulties such as the lack of communication between group members, or unfamiliarity with the CSR approach. However, many students (14) reported that they did not face any difficulties.

4.3 Chapter Summary

In summary, the quantitative results in this chapter indicated that the CSR and the attributional feedback instruction was effective in enhancing students' reading comprehension performance and self-efficacy perceptions. In terms of reading comprehension and self-efficacy levels, analysis revealed a main effect of both time and program. That is, participants showed an

improvement in their scores from the pre-test to post-test. The two Intervention groups outperformed the Control group, but differences between the CSR and the CSR Plus groups' reading comprehension scores were not statistically significant. However, there was a significant difference in the levels of self-efficacy between the CSR and the CSR Plus groups with the CSR Plus group gaining higher scores.

Additionally, the interaction between time, program, and proficiency levels was not statistically significant for both reading comprehension and self-efficacy scores for the three groups, meaning that the high and the low proficiency students for the sample as a whole improved to the same degree. For reading comprehension scores, there was a significant two-way interaction between program and proficiency levels meaning that the reading comprehension scores of the three groups differed across the different proficiency groups. Post-hoc tests revealed that the low achieving participants in the CSR and the CSR Plus group performed better than students in the Control group. No two-way significant interaction between program and proficiency levels was found in the self-efficacy scores. That is, students' self-efficacy levels across the different proficiency groups improved at the same level. Moreover, Sections 4.2.2.3.1, and 4.2.2.3.2 respectively on success and failure attributions demonstrated that the intervention program was not effective in changing students' overall attributions to success and failure from the pre-test to post-test. However, for strategy use attributions alone, the CSR Plus group only showed a significant increase in their level of attributing success and failure to strategy use as shown in Section 4.2.2.3.3.

Regarding students' perceptions of the CSR and the attributional feedback intervention, the overall responses revealed positive attitudes. In other words, a considerable number of those surveyed believed that the intervention was effective and helped them to improve their reading comprehension performance, increase their self-efficacy, and helped them to change their

attributions. The next chapters, therefore, move on to discuss these findings together with the qualitative findings of the interviews and students' learning logs.

CHAPTER FIVE. QUALITATIVE RESULTS

5.1 Introduction

This chapter builds on the previous chapter, which laid out the quantitative analyses gathered from the questionnaires, the placement test and the reading comprehension test. In order to try to explain and gain in-depth insights into the findings from the quantitative data, a semi structured interview and learning logs were employed. The views and the development in reading comprehension and self-efficacy that the participants recorded in the interview and the learning logs are discussed in this chapter. The quantitative analysis revealed that at post-test the Intervention groups outperformed the Control group in both reading comprehension and self-efficacy. However, the CSR and the CSR Plus did not differ significantly in their reading comprehension level, but in the self-efficacy perceptions they did, in that the CSR Plus had significantly higher levels. The qualitative data generated is used to further explain these findings. Students' attributions for reading success and failure, changes in strategy use, as well as the Intervention groups' perceptions of the teaching instruction they received are also discussed in this chapter.

5.2 Participants in the Semi-Structured Interview and the Learning Logs

Prior to the intervention, participants in the three groups were given a reading comprehension test to examine their reading comprehension ability. Additionally, an English reading questionnaire was administered in order to explore their level of self-efficacy in dealing with reading comprehension activities, as well as attributions for their successful and unsuccessful learning outcomes. Nine students in total were selected from the sample for interview and they were given pseudonyms (See Table 5.1 below). They were selected based on their scores in reading comprehension and self-efficacy. That is, on the one hand, some participants were found to have

high scores in both reading comprehension and self-efficacy, whereas some other students had a low level in reading comprehension and self-efficacy. On the other hand, other participants in the three groups were found to have high scores in reading comprehension and low self-efficacy scores. Accordingly, students with either high or low scores in reading comprehension and self-efficacy, and low self-efficacy scores with high reading comprehension scores were invited to take part in the interview. The same selected participants took part in the interview at pre-test and post-test. The selection was made after the pre-test, choosing three students from each of the Control and the two Intervention groups.

Table 5.1

Interviewees' Reading Comprehension and Self-Efficacy Level

Control group	CSR group	CSR Plus group
Moon: HRC-HSE	Mercy: HRC-HSE	King: HRC-HSE
Ikka: HRC-LSE	Mark: HRC-LSE	Mirror: HRC-LSE
Light: LRC-LSE	Hope: LRC-LSE	Miss: LRC-LSE

HRC: High reading comprehension/ LSE: Low self-efficacy/ HSE: High self-efficacy/ LRC: Low reading comprehension

The intervention for the CSR Plus group was principally the same as for the CSR group. However, they also received an additional treatment, namely attributional feedback. At the end of each treatment session, a short reading comprehension task was administered to students, and they were required to report in their learning logs the strategies they used to accomplish the given reading comprehension activities, and how far they felt they were helpful in dealing with the

reading comprehension tasks. The researcher then provided written feedback on their performance in reading comprehension activities and the use of previewing, during, and after reading strategies that they were trained to use within the CSR approach.

In terms of performance feedback, students in the CSR Plus group received marks based on the correctness of their answers to the reading comprehension activities completed individually at the end of each class, as well as summaries they completed as part of the after reading phase of each reading comprehension task. Students' reading comprehension performance was then linked through teacher feedback to the use of the strategies learned within the CSR approach. By contrast, the CSR group were not given marks on the reading comprehension activities provided.

Regarding strategy use feedback, the teacher (the researcher) referred to the appropriateness of using the strategies to answer a given reading comprehension question. For instance, in order to brainstorm and predict ideas about a given topic in the passage, the teacher suggested that students should pay attention to looking at pictures, headings, and words written in bold at this stage. The following is an example of the teacher's feedback given to one student on both reading comprehension performance and CSR strategies use:

I think that your good answers to the reading comprehension activities are related to your effective use of the CSR strategies. By previewing (predicting from pictures), getting the gist of each paragraph, and fixing up the clunks, you have achieved a good reading performance. Just one simple remark is that when predicting, you do not need to read at this time, you just guess from the title or pictures even if your guesses are not that accurate after you start reading. For example, in section 'A', statement 3, I think that it is 'Ember' who said that and not 'Delena', as it is denoted from the picture. I guess also that you have

understood the text as you produced a piece of summary which includes the important ideas stated in the text. Well done!

After receiving the teacher's feedback on both performance and CSR strategy use, students in the CSR Plus group were again asked to comment in their logs on how well they thought their reading comprehension had improved as a result of the attributional feedback. They were also required to think about their future plans to improve the use of the CSR strategies in order to improve their reading comprehension ability. The learning logs were submitted again to the teacher.

In total, students in the CSR Plus group were supposed to submit their learning logs three times during the intervention sessions. Nevertheless, not all the participants in this group submitted their logs to the teacher, and only four students submitted the required number of learning logs throughout the whole training sessions.

The CSR Plus group were given relevant questions to guide them in writing their logs. These focused on:

1. Their reflections on which CSR strategies they used successfully or unsuccessfully.
2. How far they felt the strategies were helpful
3. How they intended to improve their use of the CSR strategies in the future.
4. Their attitudes towards the teacher's feedback on their reading comprehension performance and CSR strategy use.

5.3. Qualitative Analysis

Analyses for the qualitative data gathered from the semi-structured interviews and the learning logs were run using thematic analysis, and following both inductive and deductive approaches. First, initial codes were created by the researcher using words and short phrases based on previous literature (top-down approach) and those emerging from the data (bottom-up). According to Leavy (2014), in the deductive approach, information already exist in the literature and are used as a framework for analysis, whereas the inductive approach refers to “an in-depth process of data familiarization, using annotation tools to mark and comment upon data segments that are of particular interest (Leavy, 2014, p.615).

After coding the data, the codes were then transformed into “longer-phrased themes...to draw out a code’s truncated essence by elaborating on its meanings. (Saldaña, 2016, p.231). More details on the analysis of the qualitative tools are provided in the following sections.

5.3.1 The Interview Transcription and the Coding Process

Participants who accepted to take part in the interview were given the choice whether to be interviewed in English or Arabic. Some preferred to have it in English, others in Arabic, and one interviewee used a mixture of the three languages (English, Arabic, and French). Interviews in English were transcribed directly into English, and those in Arabic transcribed in that language and then translated into English. In order to ensure the accuracy of the translations, the translated version with the original version of the transcriptions were given to a native speaker of Arabic who is also fluent in English for verification. Because the use of French was minimal (one participant only used single words and short sentences), the translated version of the French parts of the transcripts were not double-checked.

In order to analyse the qualitative data gathered from the semi-structured interview, different procedures were undertaken. They were firstly analysed for strategies used and attributions made. After transcription and translation, transcripts were read several times and different codes for strategy use and attributions were created based on the data that emerged from students' responses to both pre-test and post-test interview questions, as well as based on the previous literature (Abbott, 2006; Jimenez et al., 1996; Klinger et al., 1998), and a codebook was created. In coding the attributions, for example, codes for students' responses were created based on dimensions of locus and controllability as suggested by Weiner (2005). That is, internal controllable, internal uncontrollable, external controllable, and external uncontrollable were categorised together (Table 5.3). Furthermore, the interviews were also analysed for students' stated perceptions of reading (coded simply as either enjoying or not enjoying reading, and whether they continued reading when facing difficulties or just stopped (See Table 5.4).

To ensure the reliability of the coding, one example of the pre-test and post-test interview transcripts from each of the Control and the Intervention groups was given to another researcher. The researcher was given the codebook and asked to apply the codes to the sample transcripts. The two researchers agreed in 80% of codes applied, and differences in coding were resolved through discussion.

Table 5.2

Coding for Reading Strategies Emerging from the Interview and the Previous Literature (Abbott, 2006, p. 652; Jimenez et al., 1996, pp. 111-112; Klinger et al., 1998)

Strategy	Definition
***Focusing on vocabulary	Focusing attention on unknown vocabulary items
***Translating	Paraphrasing parts of a text via the bilingual's other language for the purpose of clarification
*Break the text into smaller parts	Divide the text into paragraphs, sentences, and words
*Highlighting and marking	Use pencils or coloured highlighters to mark the parts of the text read
***Using context	Determine the meaning of a word or a difficult portion of the text by searching for nearby information
*Using dictionary	Consult a dictionary to look up the meaning of difficult words
**Skim for gist/identify the main idea, theme, or concept	Draw on the major points of the passage to answer the question, summarize main concept
**Scan for explicit information requested in the item	"Scan the text for specific details or explicitly stated information requested in the item"
*Ask a colleague	Ask for help from a colleague to get the meaning of a difficult word
**Use local context cues to interpret a word or phrase	Use the words in a sentence that precede or follow a specific word or phrase to understand a particular word or phrase
**Break lexical items into parts	"Break words into smaller units to promote comprehension"

****Re-read the sentence without the clunk	Understand the sentence while ignoring the difficult word
****Brainstorming	Activate prior knowledge about the topic
****Predicting	Make prediction about what will appear in the passage
****Pre-reading questions understanding	Focus on answering the pre-reading questions to have an overall content of the passage
****Click and clunk	Identify parts of the texts which are easy to understand (clicks), as well as those which are difficult to understand (clunks)
****Get the gist	State the main idea of each paragraph in one's own words
****Generate questions	Make questions about the main ideas discussed in the passage to show understanding
****Summarize	Restate the important information learned in the passage

* Strategies emerging from the interview data

** Strategies adapted from Abbott (2006)

*** Strategies adapted from Jimenez et al. (1996)

**** Strategies adapted from Klinger et al. (1998)

Table 5.3*Coding for Success and Failure Attributions Based on Data from the Interview*

Internal controllable	Internal uncontrollable	External controllable	External uncontrollable
Practice: attributing success or failure to practice/lack of practice	Ability: attributing success or failure to the ability/lack of ability to understand the text	Interaction with peers: attributing success or failure to interaction/lack of interaction with peers	Task related difficulties: attributing success or failure to easy/difficult questions easy/difficult language
Concentration: attributing success or failure to concentration/lack of concentration	Interest in reading: attributing success or failure to interest/lack of interest in reading		
Strategy use: attributing success or failure to good/poor strategy use			
Effort: attributing success or failure to effort/lack of effort, and whether students continue or stop reading			

Table 5.4

Coding for Students' Perceptions of Reading at Pre-test and Post-test, and Reactions to Difficulties Faced while Reading

Perceptions of reading	Definition
Categories of positivity/ negativity	<p>Intrinsic interest:</p> <p>Students enjoy reading</p> <p>Students like to read in both English and in their native language. Students enjoy certain types of reading (short stories and short passages)</p> <p>Importance of reading:</p> <p>Reading is an important skill. It is a way to improve overall proficiency and knowledge about different topics</p> <p>Effectiveness of the CSR strategies:</p> <p>The CSR strategies provided students with good ways to tackle the reading comprehension activities and enjoy them. The CSR strategies made students more organized in dealing with the reading comprehension activities, and hence enjoy them</p> <p>Extrinsic motivation:</p> <p>Interaction with peers made students enjoy reading by exchanging and sharing their ideas</p>
<p>Lack of enjoyment of reading</p>	<p>Lack of intrinsic interest:</p> <p>Students prefer watching documentaries and playing games rather than reading. Students perceive reading as less important than writing.</p> <p>Students do not read very much</p>

Reaction to difficulties faced when reading	Continue reading when facing difficulties: Students did not quickly stop reading when facing difficulties
	Stop reading when facing difficulties: students gave up reading when facing difficulties

For coding the learning logs, the themes created were based on the questions provided for students to guide them in writing their logs. That is, students' evaluation of the CSR strategies, their future plans to improve the use of the CSR strategies, and their perceptions of the teacher's feedback, as well as the effectiveness of the CSR strategies (Appendix M).

Table 5.5

Coding for Students' Perception of the CSR and the Feedback Instruction

Perceptions of the CSR intervention	Definition
Positive perceptions	
Reading comprehension improvement: Read faster	The CSR intervention helped students to speed up the process of reading comprehension
Plan their reading comprehension activities	The CSR made them plan their reading starting with before, during, and after reading strategies
Self-efficacy perceptions improvement	The CSR intervention increased students' confidence with reading comprehension activities
Vocabulary improvement	The CSR intervention helped the students to learn new vocabulary
Topic knowledge	The CSR helped the students to widen their knowledge about different topics
Organization in dealing with the reading comprehension activities	The CSR made the students more organized in undertaking the reading comprehension activities

Negative perceptions of the intervention (difficulties faced when receiving the instruction)	
Absenteeism	Not all group members were present all the time
Difficult vocabulary	Students came across difficult words for which they did not know the meaning
Lack of real interaction	Some members within the group did not communicate with the whole group

For students' perceptions of the intervention, views were generated from the semi-structured interview (for the CSR and the feedback intervention). However, the learning logs also provided students' perceptions of the feedback intervention. The codes for students' perceptions were generated from both the semi-structured interview and the learning logs. The interview and the learning logs were coded for students' perceptions of the different aspects of the CSR and the feedback intervention (See Table 5.5).

5.4.1 The Impact of the Intervention on Students' Reading Comprehension, Self-Efficacy, and Success and Failure Attributions: Qualitative Data

In this section, data gathered from the semi-structured interview and the learning logs will be presented to gain in-depth insights about the quantitative data obtained. That is, to explain the differences in the reading comprehension performance across the Control group and the two Intervention groups, as well as between the Intervention groups themselves. These performance differences might be explained in terms of students' perceptions of reading, strategy use, and attributions for success and failure.

5.4.1.1 Perceptions of Reading (Enjoyment of Reading) across the Three Groups. Prior to the intervention, the majority of the interviewees across the three groups said they enjoyed reading in English, although in the Control group two of the three students said they did not. Lack

of enjoyment might have been expected to be linked with low comprehension proficiency and self-efficacy level, but this was only partly the case. While Miss in the CSR Plus group commented that she much preferred watching documentaries and playing games, the low proficiency/self-efficacy student in the Control group, Light, claimed to like reading. By contrast, the two higher proficiency/reading comprehension students in the Control group also claimed to dislike reading, seeing it as less important than writing and something they did not do much of.

Reasons for enjoying reading in English included considering it as a way to improve overall English proficiency and topic knowledge (Light, Control group) and seeing it as an important skill (Hope, CSR group). Enjoyment tended to coincide with liking reading in the native language or in other languages as well (Light, Control group); Mercy and Hope (CSR group). For two students, enjoyment was more limited to certain types of reading, namely to '*short stories in English and short passages instead of long articles*' (Mark, CSR group) and reading in groups (Mirror, CSR Plus group).

At post-test, data gathered from the semi-structured interview revealed that the CSR instruction helped the Intervention students to increase their interest in reading by increasing their achievement, regardless of their proficiency level in reading comprehension and self-efficacy perceptions. However, for the Control group, there were no changes in their perceptions at post-test. In other words, in the Control group, only the LRC-LSE student, Light, continued to enjoy reading, whereas the higher proficiency students still did not. By contrast, for the CSR and the CSR Plus group, all the interviewees expressed the view that the CSR instruction helped them to enjoy reading. While the higher proficiency/reading comprehension students in the CSR group (Mercy and Mark) said that *the "CSR strategy made me enjoy reading when interacting with my peers to exchange and share ideas"*, the HRC-HSE student, King in the CSR Plus and the low proficiency

student in the CSR group, Hope, believed that they enjoyed reading because the CSR provided them with a good way to tackle the different reading comprehension activities by following strategies before, during and after reading. The low self-efficacy level students in the CSR Plus group, Mirror and Miss, reported that their enjoyment of reading was mainly linked to their “*organization in dealing with the reading comprehension tasks provided by following the CSR strategies*”.

Overall, from all the above statements provided by participants in the Intervention groups, it is very likely that the relationship between students’ enjoyment of reading and improved reading comprehension performance is a virtuous circle. In other words, the CSR and the CSR Plus groups’ improvement in reading comprehension led to improved enjoyment which then further improved their reading comprehension performance.

In summary, the qualitative data gathered on students’ perceptions of reading at pre-test and post-test supports the quantitative results in which the Intervention groups significantly outperformed the Control group in their post-test reading comprehension. Additionally, although the CSR Plus group alone received the feedback instruction, there was no indication that their enjoyment of reading increased any more than the CSR group did, reflecting the similar levels of improvement in reading comprehension attainment across the two groups.

5.4.1.2 Perceptions of the Impact of the CSR and the Feedback Instruction on Reading Comprehension Performance. Information about students’ perceptions of the effectiveness of the instruction was generated by asking participants in the CSR and the CSR Plus group to express their views on its impact on their reading comprehension achievement. The six interviewees felt that the CSR helped to improve their reading comprehension level. They believed that because the CSR approach provided them with different strategies used before, during, and after reading, this helped

them to tackle the different reading comprehension activities successfully as shown in the quotes below.

King: *The CSR was really helpful in improving my level in reading comprehension*

Mark: *I can understand what the text is about by identifying the main idea, and the supporting details or ideas for this main idea. The strategies really helped me to improve my reading comprehension skill. They made me more successful in dealing with reading comprehension activities.*

Mirror: *I feel that I am better in reading than I was.*

Mercy: *The CSR helped me to improve my reading comprehension ability.*

Miss: *The CSR strategies helped me a lot in improving my reading comprehension level by following certain strategies used before, during, and after reading.*

Hope: *I think I become more skilful in dealing with reading comprehension activities because the CSR helped me a lot to be successful in the reading comprehension activities.*

In terms of the impact of the feedback intervention implemented with the CSR Plus group, data gathered from both the semi-structured interview and the learning logs revealed that they believed that teacher's feedback helped them to improve their reading comprehension performance. First, for the interview data, the three students agreed that their reading comprehension level had improved as a result of the teacher's feedback. They claimed that the latter helped them to use the CSR strategies correctly, and hence contributed to the improvement of their reading comprehension performance. For example, King, the higher reading comprehension/self-efficacy student, said that the feedback gave him insightful instruction on the use of the CSR strategies, which made him more

aware of his weaknesses and strengths in using them. Once he became aware on how and when to use each of the strategies, his reading comprehension level had improved, in his view.

Miss, the low reading comprehension /self-efficacy student, stated that the feedback on her answers to the reading comprehension activities as well as the appropriate use of the CSR strategies had a great impact on improving her ability to deal with the reading comprehension tasks. She commented that because the feedback provided her with a clear idea about how to use the four strategy clusters learnt in the CSR approach, she became more interested in reading comprehension. Once she knew the right way to apply the CSR strategies, her motivation to tackle similar activities in the future using those strategies had increased. The higher reading comprehension /low self-efficacy student, Mirror, referred specifically to the previewing strategy, and how the feedback helped her to apply it successfully. She remarked that *“The feedback helped me to improve the use of the CSR strategies by, for example, looking at pictures and subtitles before reading to brainstorm ideas about the topic that I would learn in the text”*.

Furthermore, all those who submitted their logs believed that the teacher’s feedback helped to improve their reading comprehension performance. Some students commented that the feedback changed their way of reading and tackling the different reading comprehension tasks by making them more organized, read faster, plan their reading comprehension process starting with before reading, then during reading, and finally after reading. For example, one student mentioned, *“I can read faster with a plan that would help me to enhance my reading comprehension ability”*.

Students also added that their reading comprehension improved after the teacher’s feedback. The latter helped them to recognize their strengths and weaknesses especially in applying the CSR strategies. For example, one student said, *“The feedback was really effective. It taught me how to test my knowledge, skills, and ability, and improve them in the future”*. Another one stated, *“The*

feedback was important and helpful in getting the mistakes I have done in answering the reading comprehension questions and using the strategies. This will help me to improve my skills in the future by avoiding those mistakes”.

Two other students indicated that their reading comprehension improved because the teacher’s feedback helped them to concentrate more while reading to avoid making mistakes. One student said, *“After reading your comments, I guess my reading comprehension will be improved because it helps me to concentrate deeply on what I read”*. The other one put it, *“The feedback made me concentrate more on which strategies to use and how to answer each reading comprehension question correctly”*.

The second student who expressed the same view put it, *“The feedback excited me to improve my reading comprehension by using the predicting strategies correctly as you suggested”*. This student also added that the feedback on the CSR strategies use made her read with confidence, *“The feedback which provided me with the right way of applying the CSR strategies helped me to answer the reading comprehension questions with more confidence because everything would be clear if we apply them correctly”*.

In summary, it can be concluded that students believed that both the CSR and the feedback instruction had an impact on their reading comprehension, by allowing them for example to plan their reading comprehension using different strategies. Once they became familiar with the use of the CSR strategies, their interest to read using these strategies increased, as well as their overall level in reading comprehension activities. This could be a possible explanation for the finding from the quantitative data which showed that the CSR and the CSR Plus performed better than the Control group in reading comprehension.

5.4.2 The Impact of the Intervention on Students' Self-Efficacy Level

5.4.2.1 Perceptions of Reading (Enjoyment of Reading). Similar to reading comprehension performance, students' perceptions of reading, strategy use, and attributions for success and failure could also have been factors which influenced their level of self-efficacy. Students' sense of self-efficacy was also related to their level of perseverance. The following sections present different data gathered from participants in the three groups and seek to explain how the earlier mentioned factors affected their sense of self-efficacy.

The CSR and the CSR Plus group believed that their sense of self-efficacy had been increased as a result of the increase in their interest and enjoyment of reading. However, this was not the case for the Control group, for whom neither interest nor self-efficacy had increased. As Mirror, the HRC-LSE student in the CSR Plus group indicated, the CSR instruction made her more excited in dealing with the reading comprehension activities, and hence increased her confidence in reading comprehension. The CSR instruction also helped students to exchange ideas (King, Miss, the CSR Plus group, Mercy, Hope, the CSR group), and use different strategies when dealing with the different reading comprehension activities. This made them more organized in dealing with the tasks, and hence improved their overall level in reading comprehension by increasing their confidence (Miss, King, the CSR Plus group, Mercy, Mark, and Hope, the CSR group). That is, improvement in their sense of self-efficacy might have led to the enhancement of students' enjoyment of reading, and which then further improved self-efficacy perceptions. This result could explain the difference in self-efficacy perceptions between the Control and the Intervention groups. In other words, because the CSR and the CSR Plus group enjoyed reading more at post-test, their level of self-efficacy increased, and hence their reading comprehension performance compared to

the Control group, whose perceptions of reading and therefore overall level in self-efficacy perceptions and reading comprehension did not change.

5.4.2.2 Differences in Strategy Use across the Control, the CSR, and the CSR Plus

Group. In this section, differences in reading strategies reported by the three groups at pre-test and post-test will be presented. Strategy use differences may illuminate the groups' reading comprehension achievement as well as their sense of self-efficacy.

Findings (Appendix N) showed that there were differences between the Control and the Intervention groups in the reported strategies used at post-test, but also at pre-test. The CSR and the CSR Plus groups applied the CSR strategies taught in the reading comprehension training sessions (previewing, click and clunk, get the gist, question generation, summary writing), which were then different from those used at pre-test. However, the Control group did not show differences either in the number of strategies applied at pre-test and post-test or in the type of strategies used. They only referred to *focusing on vocabulary* and *skimming for gist/identify the main idea, theme, or concept*, and *scan for explicit information requested in the item*.

A closer look at the pre-test data (Appendix N) based on students' proficiency level across the three groups revealed that there was a use of a shared strategy between the three groups (*focusing on vocabulary*), and which was mainly used by higher reading proficiency learners, regardless of self-efficacy level. Nevertheless, at post-test, only the Intervention groups showed a use of similar strategies (the CSR strategies). With regards to differences across proficiency level, within the Intervention groups the only difference was in the previewing strategies in which low – level students preferred brainstorming and predicting using pictures, words in bold and headings, whereas for the high –level students, they indicated that they preferred answering the pre-reading questions. For example, while the low proficiency students, Miss (CSR Plus), and Hope (CSR)

thought that brainstorming and predicting were helpful especially when gathering background knowledge about the topic, the higher proficiency students (King, CSR Plus), and (Mercy, CSR) preferred answering the pre-reading questions.

In terms of strategies applied in dealing with the reading comprehension activities, participants were also asked about how they dealt with the difficult words faced while reading. Prior to the intervention, analysis (Appendix N) revealed that there were similar ways students across the three groups used when fixing up the difficult words such as *using dictionaries* and *asking a colleague*, yet, using dictionaries was associated with low self-efficacy learners only.

At post-test, the CSR fixing up strategies (*using context, use local context cues to interpret a word or phrase, break lexical items into parts, and re-read the sentence without the clunk*) seemed to be used by both high and low-level students in the CSR and the CSR Plus group. By contrast, in the Control group, participants used the same strategies at pre-test and post-test. They referred to *using context* and *asking a colleague* to fix up the clunks in both phases. It can be thus suggested that the CSR intervention helped the Intervention groups to use different strategies to fix up the meaning of difficult words, which then allowed them to improve their sense of self-efficacy, and hence their reading comprehension performance at post-test. Whereas, for the Control group, just as the level of their self-efficacy perceptions did not significantly change from the pre-test to post-test as shown by the quantitative results, nor did their strategy use change across the two-time points.

Overall, the observed change in the use of reading strategies from the pre-test to post-test in the Intervention groups may relate to the improvements seen in the self-efficacy and reading comprehension scores. That is, because students in the CSR and the CSR Plus group used more strategies at post-test compared to the Control group, their sense of self-efficacy increased, and

hence their reading comprehension performance. However, for the Control group, there was no change which may be attributable to their persisting lower use of reading strategies.

5.4.2.3 Attributions for Success and Failure across the Control, the CSR, and the CSR Plus Group. Regarding students' attributions for success and failure at both pre-test and post-test, Table 5.7 and Table 5.8 below summarize the differences across the three groups as well as across the different proficiency levels. Attributions for success at pre-test and post-test, and attributions for failure at pre-test and post-test are presented separately.

Table 5.6

Summary of Success Attributions at Pre-test and Post-test

Reasons for success at pre-test			
	Control	CSR	CSR Plus
HRC-HSE	Ability	Good strategies	Good strategies
HRC-LSE	Practice	Task-related difficulties	Interest in reading / practice
LRC-LSE	Task-related difficulties/ concentration	Ability	Interest in reading
Reasons for success at post-test			
	Control	CSR	CSR Plus
HRC-HSE	Ability	Good strategies/ interaction with peers	Good strategies/ability
HRC-LSE	Good strategies/ concentration	Good strategies/ interaction with peers	Good strategies
LRC-LSE	Concentration	Good strategies/ task- related difficulties/ interaction with peers	Good strategies

Data summarised in Table 5.6 above revealed that there was a change in students' attributions for success at post-test. That is, at post-test, all students in both the CSR and CSR Plus groups attributed their success to good strategy use, whereas at pre-test, only the higher proficiency students linked their success to that factor. In the Control group, there was little change in attributions, apart from the HRC-LSE student who mentioned strategy use at post-test. This appears to suggest that the CSR intervention contributed to changing the Intervention groups' success attributions and linking them to the internal controllable factor (strategy use). The change in the Intervention groups' attributions for success could be related to improvement in their self-efficacy perceptions and hence their reading comprehension performance at post-test. In other words, it was because the Intervention groups linked their success to an internal controllable factor that their self-efficacy level increased more than was the case for the Control group.

Table 5.7

Summary of Failure Attributions at Pre-test and Post-test

Reasons for poor performance at pre-test			
	Control	CSR	CSR Plus
HRC-HSE	Task-related difficulties	Concentration	Ability
HRC-LSE	Concentration	Concentration	Task-related difficulties
LRC-LSE	Concentration/effort	Task-related difficulties	Poor strategies/ability/effort
Reasons for poor performance at post-test			
	Control	CSR	CSR Plus
HRC-HSE	Ability	Task-related difficulties	Poor strategies/ability/practice
HRC-LSE	Concentration	Ability/concentration	Poor strategies/effort
LRC-LSE	Task-related difficulties	Task-related difficulties	Poor strategies/task-related difficulties/ability

Overall, differences in the Intervention and the Control group's self-efficacy as shown by the quantitative results might be explained in relation to students' attributions for success and failure. In other words, there was a change in success attributions in that both the CSR and the CSR Plus group attributed their success to strategy use at post-test. Not only did both Intervention groups link their success to strategy use, it was also the case that their reading comprehension achievement was significantly higher than the Control group. It seems, however, that the CSR intervention was effective in helping students to attribute their success, but not their lack of success, to strategy use. Only the CSR Plus group made strategy attributions for lack of success at post-test, most likely because of the feedback intervention they experienced which encouraged them to link learning outcomes to strategy use.

In summary, the significantly higher level of self-efficacy of the CSR and the CSR Plus group coincided with their change in success attributions to strategy use at post-test, which then contributed to their greater sense of self-efficacy and hence reading comprehension. Moreover, the CSR Plus group's level of self-efficacy was significantly higher than the CSR and the Control group as shown by the ANOVA test. In other words, while the Control and CSR groups attributed poor performance to ability, concentration and task-related difficulties at both time points, the CSR Plus group showed a greater tendency to make strategy-related attributions at post-test. This difference can be linked to the feedback intervention which may have helped them to link their success more to an internal and controllable factor (strategy use), which then helped them to increase their sense of self-efficacy.

5.4.2.4 Reaction to Difficulties Faced while Reading. This section reviews the data for students' reactions to difficulties faced while reading, aiming to provide evidence on differences in self-efficacy perceptions between the Control and the Intervention groups to further illuminate the results from the quantitative data.

Participants interviewed in the CSR and CSR Plus groups believed that the CSR helped them to continue reading when faced with difficulties. This made them feel more confident in undertaking the different reading comprehension activities. Students in the CSR and the CSR Plus group claimed to continue reading because of the effectiveness of the CSR strategies. For example, King and Mirror (the CSR Plus group) commented that because the CSR provided them with an easy way to tackle the different reading comprehension tasks, they tended to continue reading when faced with difficulties. The CSR approach also allowed students in the two Intervention groups to interact with their group members, share ideas, and exchange information which then helped them to continue reading and hence improved their confidence in reading (Hope, the CSR group; Miss, the CSR Plus group).

At pre-test, the HRC-LSE and the LRC-LSE participants in the CSR Plus group expressed the view that they stopped reading when encountering difficulties; yet at post-test, all CSR and CSR Plus participants interviewed said that whenever they came across difficulties while reading, they just continued reading. Therefore, these data indicate that the CSR strategies helped the participants in the Intervention groups to increase their persistence in dealing with reading comprehension activities. Working in groups and providing students with relevant strategies to undertake any reading comprehension activities helped them to more easily fix up the difficulties they came across, by continuing reading, and hence increased their confidence.

5.4.2.5 Students' Perceptions of the Impact of the Teacher's Feedback on their Self-Efficacy Perceptions. For students' perceptions of the impact of the feedback on their self-efficacy, the three interviewed participants in the CSR Plus group perceived it positively. That is, King, the higher proficiency student, indicated that the feedback provided helped him to increase his sense of self-efficacy, because it showed him how to apply the strategies correctly with different reading comprehension tasks. The two other students, Mirror and Miss, believed that their confidence had increased as they became more aware from the feedback of their strengths and weaknesses in both applying the appropriate reading strategies and the reading comprehension level achieved.

Regarding data gathered from the learning logs, nine participants expressed the belief that the teacher's feedback helped them to use the CSR strategies successfully, and thus increased their confidence in undertaking similar activities in the future. For example, one student said, "*Now, I know how to use the brainstorming strategy better, I know I have been bad in predicting and had no idea about it, but now I have many ideas on how to use the previewing strategy. I can take even more difficult activities in the future as long as I know this strategy*". One other student stated, "*I know how to apply correctly the CSR strategies such as the use of the pre-reading strategies which I have not been using them correctly. I feel that I am more confident now in reading comprehension tasks*".

Overall, the qualitative data gathered from the interview and the learning logs on students' perception of the instruction revealed that the feedback training sessions were seen as effective. This confirms the quantitative results in which both Intervention groups significantly improved their level of self-efficacy at post-test. However, the observed difference in self-efficacy between the CSR and the CSR Plus groups was shown to be statistically significant. The qualitative data indicate that this difference may have arisen from the way in which the feedback intervention made the CSR

Plus participants aware of their strengths and weaknesses in using the CSR strategies and link their good and poor performance to strategy use.

5.4.3 General Perceptions of the CSR and the Feedback Intervention

This section presents students' views about the CSR and the feedback instruction. Different from earlier sections in which only students' perceptions of the impact of the intervention on their reading comprehension and sense of self-efficacy were provided, their views on areas unrelated to reading comprehension and self-efficacy, as well as difficulties faced when being exposed to the intervention are provided in this section.

5.4.3.1. Positive Perceptions of the CSR Intervention. A common view amongst the interviewees about the CSR intervention was that they liked it. For example, the HRC-HSE, LRC-LSE students in the CSR Plus group, and the LRC-LSE interviewee in the CSR group said that, they liked the instruction. The HRC-LSE student in the CSR Plus group suggested that the *CSR* instruction was a good way to teach reading comprehension. Moreover, the HRC-LSE participants expressed the belief that the CSR helped them to learn new vocabulary, and also widen their knowledge about different topics based on the passages provided in the CSR training sessions.

5.4.3.1.1 The Effectiveness of the CSR Strategies. Students in the CRS Plus group were asked to evaluate the effectiveness of the CSR strategies in their learning logs. All the participants who submitted their logs believed that the CSR strategies were helpful and effective in improving their reading comprehension performance and learning new words. They added that the practice of these strategies helped them to easily use and apply them in all the reading comprehension activities provided. They also reported that the CSR strategies gave them a general overview about the texts

and then enabled them to more easily understand them. Therefore, they decided to apply these strategies with future reading comprehension activities. However, one student commented that the effectiveness of the approach would be greater when working with serious members within the group. She commented that she could not benefit too much from the approach, as there were some members in her group who were not serious and did not collaborate very much with the whole group. She put it, *“To me, this strategy is effective if the person was within a serious group of people considering that you would get benefits from each other in exchanging ideas and thoughts”*.

The three interviewed participants in the CSR Plus group perceived the teacher’s feedback positively. They believed that it was easy to understand and was very useful in helping them to improve the use of the CSR strategies as well as their reading comprehension performance. They also expressed the view that the feedback provided them with good instruction in how to use the CSR strategies appropriately (King and Miss). Additionally, students also reported that they did not face any difficulties when receiving the feedback instruction, and thus they did not suggest any changes to improve it.

5.4.3.1.2 Organization in Undertaking Reading Comprehension Activities. The LRC-LSE students in the CSR and CSR Plus groups expressed the opinion that the CSR instruction helped them to be more organized when they read. They stated the following:

Hope: *The CSR helped me to be more organized in dealing with reading comprehension activities.*

Miss: *This strategy made me more organized. The before reading strategy helped me to check if I had ideas about the text, and then checked them while reading the text because I would learn more and understand it better by fixing the clunks and getting the gist.*

5.4.3.2 Difficulties Faced when Receiving the CSR Instruction. Regarding difficulties students faced when receiving the CSR instruction, some felt that there were no difficulties, while others considered that they faced difficulties such as absenteeism, lack of interaction between group members, and some difficult words.

Absenteeism. The HRC-LSE student in the CSR Plus group referred to this as a difficulty she faced when receiving the CSR instruction, whereas, none of the CSR group or HRC-HSE, and LRC-LSE students referred to that. This student stated the following:

Mirror: *One problem was that some members of my group were absent, we worked only in three in one of the sessions, and we needed the whole members to be present to be able to divide and perform the roles more accurately.*

Difficult Words. Mercy, the HRC-HSE student in the CSR group, indicated that she faced some difficult words when being exposed to the instruction. None of the interviewees in the CSR Plus expressed the same view. She commented, *“At first, I faced some difficult words which sometimes made me feel uncomfortable in dealing with the activities. But, I understood everything after working with my group”*.

Lack of Interaction. As the LRC-LSE interviewee in the CSR group indicated, another difficulty faced was the lack of real interaction and communication between group members when working collaboratively. She put it, *“When working with the CSR instruction, there was not a real interaction with my group members. Each one within the group tried to read and work individually. So, there was a mis-communication within the group”*.

No Difficulties. Three participants stated that they did not face any difficulty as shown in the following excerpts:

King: *I faced no difficulties.*

Mark: *I did not face any difficulty when working with my group members and deal with the reading comprehension activities.*

Another LRC-LSE student in the CSR Plus group added that the instruction helped her to understand more the sense of working and benefiting from group work activities. She stated, “*There was not any difficulty. This strategy makes us close more to each other. All members were serious and good learners*”.

5.4.3.2.1 Difficult CSR Strategies. In addition to statements about the general difficulties faced, the participants were asked about the difficult CSR strategies (before reading, during reading, or after reading strategies). Data were gathered from both the semi-structured interview (with both Intervention groups), and from the learning logs (with the CSR Plus group).

Table 5.8

Difficult CSR Strategies Generated from the Interview data for the CSR and the CSR Plus

Difficult CSR strategies	CSR	CSR Plus
Brainstorming and predicting	LRC-LSE	LRC-LSE
Click and clunk	HRC-LSE	
Get the gist		LRC-LSE
Click and clunk and get the gist		HRC-LSE
None of the above was difficult	HRC-HSE	HRC-HSE

The low proficiency students in the CSR and CSR Plus group indicated that brainstorming and predicting used before reading were the most difficult strategies for them. While Miss (the CSR Plus group) believed that the brainstormed and predicted ideas may not always be accurate and the

same as the passage discussed, Hope (the CSR group) said that she found those strategies difficult because there were many possibilities of doing them, and that the group members did not generate the same ideas.

The HRC-LSE student in the CSR Plus group indicated that both click and clunk and get the gist were difficult to follow. She linked that to mainly the deep analysis the passage needs to get the gist. She added that this takes time because students needed to analyse everything they read step by step by fixing up the meaning of the difficult words, excluding the unnecessary details, and identifying the main ideas. However, the HRC-LSE student in the CSR group found the click and clunk strategy the most difficult. The reason she gave was related to a lack of vocabulary which made it hard to get the meaning of the difficult words faced while reading. For the LRC-LSE student in the CSR Plus group, she mentioned that she found it difficult to get the gist of the passage because this needed deep analysis.

The high reading comprehension/self-efficacy students did not refer to any difficult strategies. They suggested that practising these strategies many times with different reading comprehension activities provided in the classroom made them easy. That is, for King (the CSR Plus group), none of the CSR strategies was difficult to understand and apply with the reading comprehension activities because he had been trained on how to use them in a good way. Whereas, for Mercy, (the CSR group), practising the CSR strategies with the teacher many times made them easy to follow.

In their learning logs, the CSR Plus group also provided an evaluation of the CSR strategies. Of those who submitted their logs, three students indicated that the before reading strategies were the most difficult. For example, one student stated, "*The difficult strategies are those used before reading coz I cannot understand until I read*". One other student specified that the greatest

difficulty was the predicting strategy; *“Predicting was the most difficult for me because the predicted ideas may not always relevant to the content of the text”*. The third student suggested that it was hard to anticipate the content of the text from just the title and pictures. She felt that it was when reading the text, that she could understand it.

Three students found fixing up the clunks the most difficult strategy. One student stated that she could not understand the difficult words without using a dictionary. The other two students believed that they sometimes felt lost as to which fixing up strategy to use to get the meaning of the difficult words. For getting the gist, four students indicated that it was the most difficult strategy to use during reading. One student found it difficult as it required focus and deep analysis of the text. Another student indicated that it was time consuming to get the gist for each paragraph especially if the text was long and difficult to understand. One other student expressed the view that during reading strategies were the most difficult because sometimes the words were not simple and did not help too much to get the gist of the paragraphs.

None of the participants found that after reading strategies were difficult. They indicated that after brainstorming, predicting and getting the main ideas of the texts, the last step would be the easiest to follow. Furthermore, six students indicated that before reading strategies were the easiest strategies to understand (both brainstorming and predicting). For during reading strategies, seven students commented that they were easy to follow. Only two students specified that the fixing up the clunks was the easiest, and only one referred to getting the gist in particular, whereas the other four referred to both fixing up the clunks and getting the gist. Four students mentioned that after reading strategies were the easiest to follow.

In summary, the low proficiency students across the CSR and the CSR Plus groups found some of the CSR strategies difficult to follow (before and during reading). However, for the high

reading comprehension/self-efficacy students, none of the strategies was difficult. The previewing strategies were the strategies perceived to be the most difficult by the low-level students in the CSR and the CSR Plus group. Click and clunk were difficult for the HRC-LSE student in the CSR group, whereas, the LRC-LSE student in the CSR Plus group found difficulty in getting the gist strategy used during reading. After reading strategies were easy to follow for both high and low-proficiency students in the two Intervention groups. Additionally, for the learning logs, data revealed that students in the CSR Plus group found difficulties in applying the CSR strategies. Ten students in total indicated that they found difficulties in using before and during reading strategies.

In general, these results suggest that the CSR Plus did not outperform the CSR group in their reading comprehension performance perhaps because they found difficulties in the CSR strategies. Although both the CSR and the CSR Plus group indicated that some strategies were difficult, the feedback may not have helped the CSR Plus group to apply the CSR strategies fully, although they said in the logs that they implemented and used the feedback provided. That may explain why, by contrast, self-efficacy was significantly higher for CSR Plus group, in that they perceived the feedback as helpful as it provided them with suggestions and guidelines on the use of the CSR strategies. Moreover, the attributional feedback allowed them to link performance to strategy use, also contributing to enhanced self-efficacy.

5.4.3.3 Future Plans to Improve the Use of the CSR Strategies. As part of the efforts to make the CSR Plus group more autonomous in applying the strategies, and perceive the link between strategy use, reading comprehension proficiency, and sense of self-efficacy, they were asked to write in their logs their own future plans to improve the use of the CSR strategies for previewing, during, and after reading strategies. The purpose of this was to make them link their reading comprehension achievements to the internal controllable and changeable factor (use of the

CSR strategies), and hence to improve their overall reading comprehension proficiency and self-efficacy perceptions.

Evidence that the Intervention was too Short

Practice: Nine students suggested that in order to improve the use of the CSR strategies in the future they had to practise them more and more. For example, one student suggested that practising the strategies with classmates would help to improve the application of the strategies, however, another student believed that she needed to practise them individually then in a small group, *“Practising the strategies alone or just with one student only instead of in groups. This is my plan to improve the use of the CSR strategies in the future”*. Some students suggested that they would like to apply the CSR strategies in the future with different reading comprehension tasks in order to develop their knowledge more and more about the approach. For example, one student indicated, *“What I can think about is to use the CSR strategies in the future with different reading comprehension tasks”*.

From the above statements, it appears that students in the CSR Plus group felt they did not get enough training on the use of the CSR strategies, that is, they suggested practising them more in the future with similar reading comprehension activities. This may explain the non-significant difference in the reading comprehension scores of the CSR Plus from the CSR group.

Learn New Words: Three students referred to learning new words as one plan in order to fully understand the CSR strategies. The good range of vocabulary would help students to brainstorm as many ideas as possible, understand the main ideas of the passage, as well as fixing up the clunks and summarizing the text.

The aforementioned plans suggested by the participants revealed that the intervention helped them to be more autonomous. Students could think about their own ways to improve the use of the CSR strategies. This also indicated their understanding of the strategies, so that they planned for improving their skills in applying them.

Evidence for the Lack of Learners' Autonomy:

Follow the Teacher's Comments. Three students said they just relied on the comments suggested by the teacher to improve the use of each strategy. For example, for one student who had difficulties with the brainstorming and predicting strategies, the teacher (the researcher) suggested:

What matters is that you know something about the topic which may help you to understand better the text because it is not necessary to know much about the topic given.

Brainstorming can be done by looking at pictures, headings, titles, and words written in bold. I agree that sometimes the title and the picture do not give you enough information to brainstorm and predict, but it is also useful to skim the text quickly without scanning it or go deeper into it by looking at key words which may be written in bold. Another useful strategy to brainstorm and predict is to discuss the pre-reading questions linked to the text. This may also give you a clear clue about the content of the text that you will read. I hope this gives you a clear picture about how to use the previewing strategy by knowing how to do brainstorming and predicting in the future.

The student's reaction was:

Yes, the feedback was effective in influencing my reading comprehension ability. Now, I know how to use the brainstorming strategy better, I agree I have always been bad at predicting and had no idea about it, but now, I have many ideas on how to use the previewing strategy. Basically, according to the feedback you gave me, the techniques were

the most effective, I can't think of anything else. Therefore, I will be relying on what you gave me until I get better at it, I might think of my own techniques.

With another student who had a problem with the getting the gist strategies, the researcher's comments were as follows:

To identify the main idea of each paragraph, you should focus only on the necessary information and exclude the unnecessary details by identifying the most important person, place, or thing in the paragraph you have just read, and then state the most important idea about the person, place, or thing. Therefore, the gist is providing as few words as possible while conveying the most meaning, leaving out details.

This student replied:

Actually, this feedback is very helpful and effective in enhancing my reading comprehension level. It allows to evaluate my level in reading comprehension as well as the use of the CSR strategies learnt. How to understand the passages, how to get from the title and the pictures different ideas (it gives us much help). I can do better with it in the future. I guess that in order to better improve the getting the gist strategy, I should focus only on the necessary information and exclude the unnecessary details by identifying the most important person, place, or thing in the paragraph read, and then state the most important idea about the person, place, or thing.

For the third student who found difficulty in fixing up the clunk used during reading, the researcher commented on how to improve the use of this strategy:

For the during reading strategies in which you face difficulties with understanding the language of the text, I think it is useful to use some of the fix up strategies to get the meaning

of individual words such as using the dictionary, breaking up the word into smaller parts, and also guessing from the context. If one of those strategies do not really help you, I suggest that you discuss with your group members and ask them whenever you face a difficult word and you cannot fix it up. For example, the role of the clunk expert while working collaboratively is to help the other members understand the meaning of the clunks. I hope this gives you a clear picture about how to get the meaning of the difficult words that you may come across while reading.

This student commented:

I think that your feedback is so helpful in affecting my reading comprehension performance now and in the future. In the future, in order to be successful in understanding the difficult words I should follow the techniques you suggested such as breaking up the word into smaller parts, and also guessing from the context.

The above statements show that students relied heavily on the comments provided by the teacher to improve the use of the CSR strategies and therefore imply that learners were not autonomous. They could not think of their own ways to improve the use of the strategies.

Evidence for Learners' Autonomy in the Use of the CSR Strategies

Do Further Research on the CSR Strategies. Two students suggested doing further research on the CSR strategies as one important plan to improve the use of the CSR strategies. For instance, one student put it, *“I need to do further research on this approach coz I did not understand it”*.

Respect the Order of the CSR Strategies. Five students suggested following the order of the strategies in applying them with any reading comprehension tasks in the future. They commented that they should start with before reading strategies to allow them to brainstorm and predict ideas

about the text. The next step would be to read the text and understand it by fixing up the clunks and getting the gist, and finally trying to wrap up and review the text read by summarizing it.

For some other students, they suggested their own ways to improve each of the before, during, and after reading strategies. For example, in order to improve the getting the gist strategy, one student suggested asking questions about the main idea of each paragraph. Questions could be about the important person, thing, or place in the paragraph. Another student suggested reading each paragraph many times and analysing it deeply could help a lot in getting the gist.

Three students had their own plans for the brainstorming and predicting strategies. One student suggested that brainstorming so many ideas would be very helpful in understand the text while reading it. Two other students suggested that they planned to allocate much time to reading the title and understanding the pictures because they could help in understanding the content of the passage read. For plans to improve the fixing up the clunks strategies, one student preferred to only rely on dictionaries to avoid making mistakes. Another student thought it is would be better to rely on the context rather than just dictionaries to get the meaning of the difficult words faced while reading.

Overall, after students' identification of problems they had with the application of the CSR strategies, they suggested ways in which those strategies could be improved in the future. This may have helped them to strongly perceive the link between strategy use, reading comprehension performance, and self-efficacy perceptions. That is, attributing success or failure to an internal controllable and changeable factor (strategy use) which can be modified would increase their sense of self-efficacy, which then would improve their reading comprehension performance.

To sum up, Section 5.4.3 demonstrates the positive perceptions of the CSR and the CSR Plus group regarding the instruction, as well as difficulties they faced when being exposed to the intervention. Students believed that the instruction positively influenced their use of the CSR strategies, and made them more organized in dealing with the reading comprehension activities. Moreover, while students showed positive perceptions, they also found some of the CSR strategies difficult to follow, and thus they suggested plans to improve the application of these strategies with future tasks.

5.5 Chapter Summary

In summary, this chapter presented the qualitative data gathered from the semi-structured interview and the learning logs on the CSR and the feedback instruction. Findings revealed that there was a change in the Intervention groups' perceptions of reading at post-test compared to the Control group. There were also differences in the reported strategies at post-test between the Control and the Intervention groups. With regards to attributions for success and failure, there was a slight change from the pre-test to post-test, and those attributions slightly differed across high and low proficiency students. Differences in enjoyment of reading, strategy use, reaction to difficulties faced while reading, and attributions for success and failure were related to differences in reading comprehension and sense of self-efficacy between the Control and the Intervention groups. Finally, students' perceptions of the CSR and the feedback intervention revealed that they believed that they had a positive impact on their reading comprehension performance, self-efficacy perceptions, and use of the CSR strategies. In the chapter that follows, a discussion of the findings will be provided.

CHAPTER SIX. DISCUSSION

6.1 Introduction

The present study investigated the effect of instruction in the form of CSR and attributional feedback on students' reading comprehension performance, self-efficacy, and success and failure attributions. Findings indicated that the Intervention groups seemed to benefit from the instruction with improved levels of performance at post-test. That is, the CSR students who received the CSR instruction only, and the CSR Plus who were exposed to the CSR and the attributional feedback interventions, improved their reading comprehension performance and sense of self-efficacy significantly more than the Control group at post-test. The CSR Plus group also showed an increase in attributing their success and failure in reading comprehension activities to strategy use at post-test. Therefore, this chapter discusses this effect with reference to the quantitative and the qualitative results, previous research, and to theories of reading. In particular, a discussion of the findings is presented with regards to the following research questions addressed in the present study:

1. To what extent does CSR and attributional feedback on strategy use and reading comprehension performance affect students' reading comprehension performance, sense of self-efficacy, and causal attributions?
2. Do students of different proficiency levels benefit differently from the CSR and the attributional feedback intervention with regards to their reading comprehension and self-efficacy?

3. What are the perceptions of Algerian EFL university students of the use of the CSR approach and the attributional feedback in respect of their reading comprehension achievements, self-efficacy perceptions, and causal attributions?

6.2 The Effect of the Instruction on Students' Reading Comprehension Performance, Self-Efficacy Perceptions, and Causal Attributions

In this section, a discussion of the effect of the CSR and the feedback instruction on students' reading comprehension, self-efficacy, and attributions for success and failure in reading comprehension activities is presented. A deeper understanding of the quantitative and the qualitative results of this effect in relation to the existing literature is also explored.

6.2.1 Reading Comprehension Performance

In order to examine the impact of the intervention on the CSR and the CSR Plus students' reading comprehension performance, a reading comprehension test was administered to the groups at both pre-test and post-test. The findings suggest that the intervention helped the participants in both Intervention groups to improve their reading comprehension performance more than was the case for the Control group. In other words, results of ANOVA followed by post hoc tests showed that at post-test, there was a significant difference between the Control and the CSR group, with a large effect size ($d=.9$), and between the Control and the CSR Plus group, ($d=.9$). However, the Intervention groups did not differ significantly from each other. Additionally, while the pre to post-test improvement for both CSR and CSR Plus groups was statistically significant, no such improvement was seen for the Control group. This indicates the effectiveness of the CSR intervention in helping them to increase their reading comprehension performance. These results are consistent with previous research on the effectiveness of the CSR approach on reading

comprehension performance. For example, Babapour et al. (2019), Fan (2010), Gani et al. (2016), Karabuga and Kaya (2013), Klinger and Vaughn (1999), Klinger et al. (2004), and Vaughn et al. (2011) found that the CSR instruction implemented with learners helped them improve their reading comprehension performance more than the non-CSR groups.

Within the discussion of differences in reading comprehension scores at post-test in the present study, one noticeable finding was that the pre-existing reading proficiency differed between the three groups. That is, at pre-test, the CSR group had the highest level in the reading comprehension scores, which were significantly better than those of the Control group. However, the CSR Plus and the Control group, as well as the CSR and the CSR Plus did not differ significantly. This suggests that the CSR group may have benefitted the most from the intervention precisely because of their pre-existing higher reading proficiency level, giving them an advantage that outweighed any that might have been conferred by the additional treatment given to the CSR Plus group. In other words, the CSR group did not differ significantly from the CSR Plus in their reading comprehension scores at post-test potentially because they were better at reading comprehension from the very beginning and were able to benefit more from the intervention.

Regarding the difference between the Control and the Intervention groups in their post-test reading comprehension scores, it might be explained with reference to the 'Matthew Effect', which was first proposed by Stanovich (1986) in reading. This theoretical model posits that the principle that the poor get poorer and the rich get richer applies also to reading: weak readers dislike reading, they then read less, and so fall further behind their more successful peers, whose proficiency in reading leads them to enjoy reading and to do more of it, enhancing their proficiency further. This has been confirmed in a number of studies. For example, Pfof et al. (2012), and Habibian and Roslan (2014) found that the improvement in reading proficiency for the better readers was faster

than that of the poor readers. Therefore, the significant difference between the Control and the CSR group's progress in reading comprehension in the present study seems to be consistent with the notion of 'the Matthew Effect' of Stanovich.

It is less easy to attribute the greater progress of the CSR Plus group compared with Control group to such a 'Matthew Effect', as the pre-test reading comprehension scores for the Control group (*Mean*=21.32) and the CSR Plus group (*Mean*=25.06) did not differ significantly. Despite starting from a similar position as the CSR Plus group the Control group were not able to make progress in their reading comprehension scores. That is, their scores did not change between the pre-test and post-test. This means that their lack of progress can be attributed to the absence of explicit instruction in reading comprehension, compared to the Intervention groups who received the instruction. The latter seems to have benefited the CSR and the CSR Plus group, and hence significantly outperformed the Control group in their reading comprehension scores at post-test.

The significant difference between the Control and the Intervention groups' reading comprehension scores further supports the idea of the effectiveness of strategy instruction, reading strategies, and social constructivism theory in an EFL classroom context. First, with regards to strategy instruction, the Intervention groups received the CSR instruction, in which a number of strategies were taught to the participants and implemented while students were working collaboratively in small groups. Macaro et al. (2015) suggest that strategy instruction might be helpful in increasing language skills such as listening and reading, as it helps students to monitor and have control over the use of strategies in language activities, and hence increase their motivation and skills in the tasks provided. Once students become aware of the use of the strategies, they become skilful in their own learning, in managing their learning, or simply they become self-regulated learners. According to Zimmerman (2002), self-regulated learners are more aware of the

link between the use of strategies and their learning outcomes. Those learners also make a great use of strategies which help them to achieve better results, compared to the non-self-regulated learners. Besides this, once learners have control over the strategies they use to undertake different reading comprehension activities, they become more strategic readers and become more conscious of improving their reading comprehension proficiency (Akkakoson, 2013). Likewise, in line with the aforementioned studies, Graham and Macaro (2008) also claimed the effectiveness of strategy instruction in the development of language skills. In their study, they found that learners who received strategy instruction achieved better results in their listening comprehension than their counterparts who did not. In the case of reading comprehension in particular, reading strategy instruction is also claimed to be effective in the development of EFL learners' reading comprehension performance. For example, in studies conducted by Macaro and Erler (2008), Salataci (2002), and Tiruneh (2014), strategy instruction was found to have a positive impact in enhancing students' reading comprehension performance. Once students were provided with guidelines and steps to follow when applying the CSR strategies, they seem to be able to increase their reading comprehension performance in the activities provided.

Another possible explanation for the results that both the CSR and the CSR Plus group did better than the Control group, but did not differ from one another is that the CSR intervention implemented in the present study emphasized the use of multiple reading strategies used before, during and after reading. This multiple strategy instruction has been shown to be effective in language activities. For example, Manoli et al. (2016) confirmed the effectiveness of multiple strategy instruction in enhancing students' reading comprehension performance. In their quasi-experimental study, they found that the experimental group who underwent the multiple reading instruction achieved better than the Control group who did not receive the same instruction. It can

thus be suggested that improvement in the reading comprehension appeared because both the CSR and the CSR Plus groups in the present study had a choice to use a number of strategies, they knew when, how, and where to use each strategy to solve the reading comprehension tasks provided. It seems that the strategy instruction helped the reading comprehension, while the feedback helped the self-efficacy.

Some researchers such as Ardasheva et al. (2017), and Plonsky (2011) suggest that it is more effective to teach fewer than eight strategies at a time than larger numbers. In the present study, students were taught three clusters of strategies (before, during and after reading). There were eight strategies in total; brainstorming, and predicting used before reading, click and clunk, and get the gist (during reading), and finally, summarizing and generating questions used after reading. This allocation of different strategies to different phases of reading comprehension is linked to the self-regulated learning theory of Zimmerman (2000a). According to Zimmerman (2000a), self-regulated learners have the ability to monitor the use of the learning strategies based on the aim of each task they are engaged in, and they have also the capacity to persist and challenge the difficulties faced when initiating the tasks, by selecting the appropriate strategies. Therefore, it is possible that the multiple strategy instruction, based on the CSR approach, that the Intervention groups underwent in the present study provided them with opportunities to try the appropriate strategies when performing the reading comprehension tasks, to fix the difficulties they faced, and hence they achieved success in the tasks provided.

Differences in post-test reading comprehension scores between the Control and the Intervention groups might also be related to the social constructivism theory of Vygotsky (1978). According to Vygotsky (1978), learning is a social activity which can be developed through interaction. Vygotsky suggested the zone of proximal development (ZPD), which is, “The distance

between a learner's actual developmental level of problem solving and the level of potential development through problem solving under guidance or in collaboration with more able peers" (p. 86). Once learners interact with and receive guidance from more knowledgeable others (teachers or peers), they generally use language to enhance their cognitive skills within the ZPD. Learners within the CSR approach were required to work in small groups; this might have helped them to improve their reading comprehension more than the Control group who were not exposed to group-work activities. Therefore, it may be that these participants benefited from peer interaction and collaborative work undertaken with the Intervention groups.

Similarly, Suwantarathip and Wichadee (2010) reported in their study a significant improvement in writing and reading comprehension proficiency of students working collaboratively in an EFL classroom in Thailand. The finding that the Intervention groups achieved significantly better than the Control group, therefore, supports the social constructivism theory of Vygotsky (1978) in which learning is a social activity which can be developed through interaction. Social interaction makes learners active participants in the process of learning. In other words, students learn through interaction with their peers and maximize their opportunities to take responsibility for their own learning by being active in the process of learning.

In terms of differences between the CSR and the CSR Plus group, ANOVA results revealed that although the CSR Plus group performed better than the CSR group in the reading comprehension performance at the post-test, the difference was not significant. That is, although the CSR Plus students were exposed to the CSR and the attributional feedback intervention, they were not able to significantly outperform the CSR group who received the CSR intervention only. It seems that the feedback was not sufficient to help students to improve their reading comprehension performance more than the CSR group. This might be due to the time shortage. The whole

intervention (the CSR intervention plus the attributional feedback instruction) was delivered in eight weeks. Therefore, the teacher had focused much more on the CSR strategies, and paid less attention to the training session using attributional feedback. That is, the attributional feedback was held at the end of each reading comprehension session after students completed their group work activities. The whole session took 90 minutes, however, only 30 minutes were given to the students to write their diaries and submit them to the teacher. Once the teacher provided her feedback on the diaries, students took them home and commented on the teacher's feedback. Consequently, the feedback intervention was not of equal emphasis as the CSR intervention. The focus was on the group work activities on the reading comprehension tasks, which allowed students to generate their ideas about the process following the CSR approach and report them in their diaries such as the effectiveness of the strategies, and their evaluation of the level of difficulty of each of the CSR strategies. In addition, the lack of a significant difference between the CSR and the CSR Plus might also be attributed to the amount of feedback provided for participants in the CSR Plus group. That is, not all students in the CSR Plus group submitted the required number of logs. This is a limitation for examining the actual impact of attributional feedback on their reading comprehension scores.

The qualitative data revealed that at pre-test, the Intervention groups reported that they enjoyed reading, whereas, only one student in the Control group said so. Furthermore, the Intervention groups' enjoyment of reading was maintained at post-test, and in some respects increased. They commented that the intervention made them enjoy reading when interacting with their peers, provided them with different ways to deal with the difficult words they faced. By contrast, the Control group continued to not enjoy reading. Therefore, ANOVA results indicating that the Intervention groups significantly outperformed the Control group in their post-test reading comprehension scores, are supported by the qualitative findings. That is, the Intervention groups'

improvement in reading comprehension coincided with improvement in enjoyment of reading, and which then may have further increased their reading comprehension performance at post-test. This was not the case for the Control group whose enjoyment as well as reading comprehension did not change between pre and post-test. This reflects the reciprocal relationship between students' enjoyment and performance in reading comprehension activities. In their study, Malanchini et al. (2017) suggested that students' enjoyment of reading helped them to improve their reading comprehension and that improvement made students enjoy reading. This confirms that the relationship between enjoyment of reading and performance is reciprocal.

For differences in reading comprehension scores between the three groups and across proficiency levels, ANOVA results showed that there was a program*proficiency level interaction. Reading comprehension scores for the high proficiency students in the three groups did not differ significantly at post-test. However, for the low proficiency participants, there was a significant difference between the Control and the Intervention groups, whereas the two Intervention groups did not differ significantly from each other. This finding is consistent with Boardman et al. (2016), Klinger et al. (2004), and Vaughn et al. (2011) who found that students with learning disabilities who received the CSR intervention were better than their counterparts in the Control group where the CSR was not implemented. They also found that high proficiency students without learning disabilities in the Control and the Intervention groups did not differ from each other in their reading comprehension scores. That is, regardless of the type of instruction received, students without learning deficiency in both groups improved their reading comprehension scores. However, students with learning disabilities who were exposed to the CSR made significantly greater achievements in reading comprehension than students with learning disabilities who did not receive the CSR instruction.

A possible explanation for the above findings might be that high proficiency students were using their own strategies rather than those used in the CSR training sessions, or that they were already using many of the strategies taught in the intervention too. This might also be the case for the Control group. It is also possible that high proficiency learners are able to make progress regardless of what kind of instruction they receive. Additionally, another plausible explanation might be that low achieving students in the Intervention groups benefited from working in groups, and hence benefited more from the intervention and significantly outperformed their counterparts in the Control group. That is, in the present study, students were assigned to homogeneous as well as heterogeneous groups, where students working in heterogeneous groups were given opportunities to interact with their more proficient students, share ideas, and receive assistance in accomplishing the reading comprehension tasks. This kind of scaffolding or peer mediated learning (Vaughn et al., 2001) might have helped the low proficiency students to significantly outperformed their counterparts in the Control group where no group work activities were implemented.

According to Klinger and Vaughn (1999), the CSR approach has roots in the social cultural theory of Vygotsky (1978), which posits that learning can be improved at both the individual and the social level. That is, once students interact with their peers in contexts where collaborative work activities are emphasized, they learn from each other, build new ideas, and thus increase their learning (Boardman et al., 2016). Therefore, it seems possible that the strategy instruction implemented with the Intervention groups in the present study might have helped the low proficiency students to overcome their deficiency by directing their attention towards when and how to apply, use and monitor the strategies by modelling them by the teacher and then through guided practice in small peer-discussion groups. This is also in agreement with Gersten et al. (2001) who supported the claim that the reading comprehension proficiency of students with

learning disabilities may be improved within environments where students received support or modelling. Vaughn et al. (2001), also suggested that students who have learning deficiencies or disabilities may find it difficult to learn in environments where whole class activities are implemented. This might explain the finding that the less skilled students in the Intervention groups were significantly better than their counterparts in the Control group where the teaching was a whole class.

Furthermore, students within the CSR and the CSR Plus groups were provided with learning logs materials which instructed them with different steps to follow when applying the strategies, as well as the different ways to fix up the clunks using the logs. They were also given opportunities to perform different roles within the group using roles cards, where the group members assisted each other and worked towards achieving success for the whole group. Both the 'material and human resources' students in the Intervention groups received might have helped the low proficiency students to benefit from the instruction by overcoming their deficiencies (Hattie & Timperly, 2007).

Another explanation for the lack of significant difference between the more skilled students in both conditions is not clear, but it may have something to do with their familiarity and interest in the topics provided in the reading comprehension classes. The topics might have been of interest for students, so that they were motivated to interact with the texts and hence benefited from the teaching. A better learning environment might be another factor contributed to the lack of significant differences between the more skilled students (Boardman et al., 2016). That is, students in the Control group might have not been exposed to reading classes where the environment was based on discussing the reading comprehension questions with the teacher in a whole class environment.

6.2.2 Self-Efficacy Perceptions

On the question of the impact of the intervention on students' self-efficacy perceptions, this study found that there was a significant increase in the Intervention groups' scores from pre-test to post-test. Findings also showed that the Intervention groups' levels of self-efficacy were significantly higher than the Control group at post-test as discussed in Chapter 4. This provides evidence for the effectiveness of the intervention on improvement of the self-efficacy level.

For the greater improvement in self-efficacy level of both the CSR and the CSR Plus group, there are several possible explanations. First, a possible explanation might be attributed to the strategy instruction they received. Significant improvement in the self-efficacy levels of the CSR and the CSR Plus groups agrees with the findings of other studies, in which strategy instruction was claimed to be effective in enhancing EFL learners' sense of self-efficacy (for example, Graham, 2007; Rahimirad and Zare-ee, 2015 in listening, Kargar and Zamanian, 2014; Raissi and Roustaei, 2013; Taghinezhad et al., 2015 in reading). It seems possible that strategy instruction helped students to be more self-regulated learners. Zimmerman (2000a) suggested that because self-regulated learners' awareness about the use of strategies increased within strategy instruction, they showed a more positive judgment of their capabilities to challenge difficult activities, to persist and never quit easily the learning tasks when faced with difficulties, and hence have higher self-efficacy perceptions.

The CSR approach implemented in the present study emphasized the use of a number of strategies. This might explain the students' choices of the use of strategies, which could be a factor causing improvement in their self-efficacy perceptions scores at post-test. This relates to studies by Magogwe and Oliver (2007), and Tercanlioglu (2002) who found that there was an association between strategy use and self-efficacy for language learning. In the present study, strategies used to

undertake the reading comprehension activities enhanced learners' sense of self-efficacy, by allowing them to be strategic in approaching the reading comprehension tasks. That is, because strategic readers have control over the use of reading strategies which fit their goals, they are aware of the use of different strategies, they become self-directed learners, autonomous in the process of learning, and hence their level of self-efficacy increases. Therefore, self-efficacious learners engage in the activities despite the difficulties faced, put in more effort to persist and engage in the activity or in performing the task, compared to the low self-efficacy learners who easily give up the tasks when faced with difficulties (Zimmerman, 2000a).

The above results are also in agreement with Macaro and Erler (2008). Their study indicated that strategy instruction made students more strategic readers, meaning that they were flexible in the use of the strategies. They knew how and when to apply the strategies depending on the text and the tasks given. In their study, although the tasks seemed to be difficult, the intervention students achieved higher results. This might be attributed to the self-efficacy factor which then allowed them to challenge the difficulties encountered. This means that the instruction helped the intervention group to increase their sense of self-efficacy compared to the comparison group who perceived the tasks to be difficult. Also, the instruction made them more actively engaged with the activities by focusing on the use of strategies. It also made them more motivated in reading in particular and the French language in general.

Furthermore, there are, however, other possible explanations for the significant improvement in the level of self-efficacy of the CSR and the CSR Plus group. It seems possible that these results were due to the collaborative work activities the two groups underwent. In the qualitative data, they expressed that their confidence in undertaking the different reading comprehension activities increased because they were working in groups. The interaction with their

peers allowed them to exchange ideas, seek guidance, and fix up the difficult words easily. Noroozi and Mehrdad (2016) further supported this view in their study. In their analysis, the level of self-efficacy of the experimental group who underwent group work activities to learn the meaning of new words was significantly better than the Control group. This view is also supported by Law et al. (2015) who argued that the sense of self-efficacy within collaborative work activities might increase as learners are provided with opportunities to observe their peers interacting with the activities, and hence managing the activities provided, and then increasing their confidence. This is linked to Bandura's (1995) claim that vicarious experiences are an important source of self-efficacy. In other words, the sense of self efficacy might come from observing similar people to one's self accomplishing similar tasks. Seeing success of other students might raise the beliefs that students possess the capabilities to master the activities needed for success in that area. That is, when students are exposed to situations to observe their peers doing the tasks successfully, these opportunities may help them to foster positive beliefs about themselves as learners.

The significantly larger increase in the CSR and the CSR Plus group's sense of self-efficacy compared with the Control group could also be attributed to their attributions for both success and failure at pre-test and post-test. That is, as shown by the Mann Whitney U test, there was a significant difference in attributing success to strategy use at post-test between the Control and the Intervention groups. In other words, the CSR intervention was effective in making the participants ascribe their successful achievements to the internal, controllable and changeable factor (strategy use). This finding is in line with those by researchers such as Hsieh and Kang (2010), and Graham and Macaro (2008). They argue that high self-efficacy learners are likely to link their successful and unsuccessful achievements to internal, changeable, and factors which are within their control. However, those who attribute their performance to external, static, and uncontrollable factors are

more likely to have lower levels of self-efficacy. This suggests that once learners possess high levels of self-efficacy, they put in more effort, show more persistence in undertaking different language activities, compared to students with low sense of self-efficacy who easily give up on tasks when faced with difficulties (Boakye, 2015).

Turning now to differences in self-efficacy scores between the Intervention groups, the ANOVA results indicated that the CSR Plus group had higher levels of self-efficacy at post-test. A plausible explanation for this might be the attributional feedback on their strategy use they received from the teacher. The CSR Plus group alone significantly increased their strategy use attributions for success and failure. The qualitative data showed that the CSR Plus students reported that their confidence in dealing with reading comprehension activities had increased because of the suggestions provided in the feedback they received. Boakye (2015) claims that feedback helps students to improve their sense of self-efficacy and suggests how to improve the use of strategies. Macaro et al. (2015) also supported this view by suggesting that learners' sense of self-efficacy could be promoted by providing feedback which stresses the association between the use of learning strategies and the learning outcomes. This is further confirmed by Graham and Macaro (2008) who point out that improvement in language skills (listening) is linked to modifying students' attributions, which then might result in affecting their confidence in dealing with different language tasks. Strategies may contribute to students' motivation by allowing them to have control over the language tasks or activities provided.

It also seems possible that the teacher's feedback on the CSR Plus students' strategy use attributions helped them to increase their sense of self-efficacy, by increasing their motivation and fostering their persistence in accomplishing the reading comprehension activities. This is in line with Zimmerman (2000b)'s cyclical model of self-regulated learning, in which self-regulated

learners perceive strategies as ‘correctable’ factors, therefore, they show a more positive self-reaction to the tasks, and hence increase their sense of self-efficacy. In the self-reflection phase of the model, students make self-evaluations of their performance and causal attributions for their success and failure in the tasks, by correcting the use of strategies they planned and used respectively in the forethought and the performance phases. Once students make strategy use causal attributions, they may show a more positive self-reaction to the tasks provided, and a more adaptive decision in trying all strategies until success is achieved (Zimmerman, 2000b). Consequently, these adaptive attributions may have helped students in the CSR Plus group in the present study in strengthening their sense of self-efficacy in accomplishing similar tasks in the future.

Another explanation for the CSR Plus group having significantly higher levels of self-efficacy than the CSR group at post-test might be that the former attributed both their success and failure significantly more to strategy use. In other words, the CSR Plus group tended to make more strategy-related attributions, by significantly increasing their strategy use attributions for failure and success. This is most likely because of the feedback intervention which encouraged them to link learning outcomes to strategy use. It can therefore be assumed that the attributional feedback was effective in making students attribute their outcomes to the internal, changeable and controllable factor (strategy use). Once learners perceive their outcome as a result of adaptive factors, which they have control over, factors which can be modified, and factors which come from within, their sense of self-efficacy to undertake similar activities in the future may increase (Chodkiewicz & Boyle, 2016).

Together these studies provide important insights into the importance of the teacher’s feedback in language learning as Graham (2007), and Chamot and Harris (2019) emphasized. These authors argued that interventions based on the teacher’s feedback or comments on learners’ strategy

use, by suggesting for example alternative ways when dealing with the reading comprehension tasks, may contribute to students' successful strategy use and thus better learning outcomes. Full details on the impact of the intervention on students' attributions for success and failure in reading comprehension tasks are provided in Section 6.2.4.

In terms of differences in the self-efficacy perceptions across proficiency level, ANOVA results indicated that proficiency was not a factor in influencing students' sense of self-efficacy. That is, both high and low self-efficacy learners in the Intervention groups benefited from the intervention in a similar manner. This result might be explained in this way. First, the low-proficiency students in the CSR and the CSR Plus groups might have gained more experience in dealing with the reading comprehension activities regardless of the teaching implemented. Therefore, they may have increased their interest as well as their motivation, and hence their beliefs about their own abilities to perform similar tasks in the future. Additionally, the topics covered in the reading classes might have helped them to increase their motivation and hence their sense of self-efficacy in the classroom. Changes in self-efficacy perceptions for the Control group were not influenced by proficiency either with neither proficiency group showing significant gains in confidence. This might be explained by the lack of any training implemented as with the CSR and the CSR Plus group.

Regarding the lack of differences between the low and high proficiency students in the CSR and the CSR Plus groups in terms of their self-efficacy scores, there are four likely causes. First, peer modeling might be one reason, as it was claimed to be effective in strengthening students' sense of self-efficacy of struggling learners, which gives them an opportunity to observe the performance of the other proficient students, their application of strategies as well as their monitoring of the language tasks (Usher & Schunk, 2018; Zimmerman, 2013). Students in the CSR

and the CSR Plus groups were given opportunities to work in small groups and observe the performance of their peers within the group. Therefore, the low proficiency students might have benefited from their more skilled learners when interacting with the tasks. This is in line with Margolis and McCabe (2004) who claim that expectations of success of learners with learning disabilities might be increased when the teacher provides them with collaborative learning activities which increased their sense of believing in their abilities to achieve success. This is also linked to Bandura's (1997) vicarious experience in which modelling of students' performance can raise their sense of self-efficacy when observing people attaining success in certain activities. Therefore, the less skilled learners across the Intervention groups did not achieve significantly less than the more skilled learners with regards to their self-efficacy perceptions. Likewise, even though the impact of the intervention on the reading comprehension scores of high proficiency students was not statistically significant, such students were able to benefit from it as far as self-efficacy was concerned.

Second, the teaching materials used when delivering the intervention with the Intervention groups might be another factor for the above finding. That is, students in the CSR and the CSR Plus groups were provided with cue cards which provided them with instructions about how, when, and what strategies to use when applying the CSR strategies. The teaching materials 'reference cards' provide students with guidelines and steps to follow when using the strategies, and hence it might help struggling learners to increase their expectations of success (Casteel et al, 2000). Accordingly, with the use of such materials, students' motivation and persistence to accomplish the tasks provided as well as to challenge the difficulties faced might have been increased, and hence their overall sense of self-efficacy. That is, students' willingness to persist when faced with difficulties might have been increased because they knew they possessed the necessary strategies to tackle the

difficulties and understand the meaning of the difficult words they encounter (Chapman & Tunmer, 2003). For the high proficiency students, they gained in self-efficacy too, given that they did not for reading comprehension might be attributed to the teaching environment provided. That is, with the reading comprehension classes implemented, students' anxiety to undertake the tasks might had been decreased, and hence their motivation and sense of self-efficacy.

The qualitative data analysis revealed that all high and low proficiency students in the Intervention groups said that they enjoyed reading. This might explain the finding that the low attaining students did not differ from the high achieving students in their self-efficacy scores. Additionally, at post-test, data gathered from the semi-structured interview also indicated that the CSR instruction helped the Intervention students to increase their interest in reading, regardless of their proficiency level in reading comprehension and self-efficacy perceptions. Furthermore, all interviewed students in both the CSR and CSR Plus groups attributed their success to good strategy use. Therefore, the lack of significant difference in the self-efficacy scores of the high and low proficiency students in the Intervention groups might be explained with regards to the above data generated from the qualitative analysis.

6.2.3 Correlation between Reading Comprehension and Self-Efficacy

Correlation analysis using Spearman's rank test revealed that there were medium to strong positive correlations between participants' reading comprehension and self-efficacy perceptions for the Control and the CSR group. The correlation was medium for both groups at the pre-test, whereas, at post-test, it was strong for the Control group only.

Looking closely at the correlations for each group, analysis showed that the correlation got stronger for the Control group at post-test. However, for the CSR and the CSR Plus groups, it was

weak. That is, despite the fact that students in the CSR and the CSR Plus groups improved their reading comprehension performance at post-test, they did not show a similar improvement in their self-efficacy level from the pre-test to post-test. A closer look at this correlation using line graphs showed that the Control group made no progress on either reading comprehension or self-efficacy, which were also very similar to one another, hence the significant correlations at both time points. For the CSR Plus group, self-efficacy improved more than reading comprehension did, to quite a large extent (hence the lack of significant correlation at post-test). Whereas, for the CSR group, at both time points, reading comprehension scores were higher than self-efficacy. This is inconsistent with the previous literature which showed that there is a strong correlation between learners' performance and self-efficacy. Generally, in language activities, Raoofi et al. (2012), and Tercanlioglu (2002) claimed that self-efficacy is related to language performance. In other words, whenever learners have higher sense of self-efficacy, they show a higher language performance.

Looking specifically at reading comprehension and reading self-efficacy correlations in previous studies, although correlations vary in strength, they are generally positive and statistically significant. For instance, Boakye (2015), Fitri E et al. (2019), Ghabdian and Ghafournia (2016), Osman et al. (2016), Salehi and Khalaji (2014), and Shehzad et al. (2019) found that there was a positive correlation between students' reading comprehension performance and self-efficacy perceptions, implying that, improvement in self-efficacy would coincide with improved reading comprehension proficiency, and vice versa. It is somewhat surprising that limited correlations were noted in the present study. This finding is, however, consistent with Carol and Fox (2017), and Wilson and Kim (2016), who also found no significant correlation between reading comprehension and self-efficacy for reading. There are, therefore, several possible explanations for the lack of

correlation between reading comprehension and self-efficacy for the Intervention groups in the present study.

Greater improvement in the self-efficacy perceptions of the CSR Plus group compared with their reading comprehension scores' growth might be attributed to a number of reasons. First, presumably, not all members in the CSR Plus group improved their reading comprehension scores when exposed to both interventions. Another reason might be that reading comprehension takes time to improve, or some students require more time when receiving reading strategy instruction to be able to show development in their performance (Vaughn et al., 2012). Moreover, encouragements and suggestions provided to the CSR Plus group might have increased their expectations of success in undertaking similar tasks in the future, because the feedback provided them with guidelines on the appropriate use of the strategies. Once students perceived the link between strategy use and performance, their motivation to accomplish the tasks might have increased, and hence their sense of self-efficacy.

With regards to the correlation for the CSR group, one possible explanation for higher levels of reading comprehension scores compared with self-efficacy might be related to their use of the CSR strategies taught in the training sessions. That is, some students indicated that they faced difficulties in applying the strategies as they were not familiar with them. This negative self-reaction might have negatively affected their regulation of learning, and hence sense of self-efficacy (Zimmerman et al., 1992). Another explanation might be that improvement in reading comprehension had been enhanced because of other reasons rather than self-efficacy. Possibly, it might be that the group work activities which provided students with an environment to ask questions, exchange ideas, help each other in understanding the meaning of difficult words have helped them to achieve better in the reading comprehension activities. As Schunk (2003) claimed,

the sense of self-efficacy students possess has an influence on achievement, but it is not the only factor which may increase or decrease their performance.

The CSR students' perceptions of the intervention might be another reason for the lack of correlation between their reading comprehension performance and self-efficacy perceptions. In other words, not all students in the CSR groups expressed a positive attitude towards the CSR strategies. Some reported that they faced some difficulties when being exposed to the instruction such as difficult vocabulary, noise in the classroom, absences of some members in the group, and the lack of interaction within the group. Those difficulties might decrease their motivation to tackle the tasks, the level of their persistence, and thus their self-efficacy within the group (Zimmerman, 2000a). It is, therefore, though the absence of the attributional feedback with the CSR group that the CSR strategy instruction helped their reading comprehension more than their self-efficacy. That is, without feedback, their self-efficacy perceptions could not increase to such an extent.

Overall, the lack of correlation between reading comprehension and self-efficacy for the CSR and the CSR Plus groups might be explained in relation to the grouping of students within the group work activities implemented in the present study. Different grouping (high-high, low-low, or high-low) were provided within the groups. Therefore, students were given opportunities to observe their peers' performance within the group. In the case of students within the group might be unsuccessful in undertaking the reading comprehension tasks, this might also have a negative impact on the other group members' sense of self-efficacy. Accordingly, this might be one factor for the lack of correlation between reading comprehension and self-efficacy perceptions for the CSR and the CSR Plus group. Usher and Pajares (2008) confirmed this view by arguing that observing a model's failure may result in diminishing motivation in initiating similar tasks. Unrau

et al. (2018) also suggested that the increase in the sense of reading self-efficacy scores when participants have learning disabilities would be less compared to studies with proficient learners.

The lack of progress in both reading comprehension and self-efficacy scores for the Control group, which were also very similar to one another, might be attributed to, mainly, two reasons. First, students' post-test performance in the reading comprehension tasks had not been increased nor their sense of self-efficacy, because they might have easily avoided the tasks when faced with difficulties. The difficulties might have negatively affected their persistence in tackling similar tasks in the future, and hence lowered their sense of reading self-efficacy. Consequently, this might have happened because self-efficacy is considered as one characteristic of the development of performance. This is what Bandura (1997) referred to as 'enactive mastery experience' which denotes that personal experiences and attainments can have great impact on individuals' judgment of their competencies. That is, success or failure in performing tasks in the past shapes how people feel about initiating similar activities (Bandura, 1997). In the present study, students' performance in the Control group was lower than the Intervention groups. This means that their self-efficacy perceptions to attain better grades in similar upcoming activities decreased, and their chances to fail were felt to be increased.

Second, students in the Control group had lower scores than the Intervention groups, and they were not exposed to any reading strategy instruction. This might be another reason for the lack of development of their scores in both reading comprehension and self-efficacy, because strategy instruction has been claimed to support learners with reading difficulties in increasing their reading comprehension performance (Wankez et al., 2010), as well as their sense of self-efficacy (Taghinezhad et al., 2015). That is, students with reading deficiencies might overcome their reading difficulties when provided with explicit teaching on the use of strategies to comprehend a text and

hence to achieve success. Students in the present study may have continued to have difficulties as they were not exposed to any intervention on the use of strategies which may help them to overcome those difficulties and hence to increase their performance as well as their self-efficacy perceptions.

6.2.4 The Impact of the Attributional Feedback on Students' Attributions for Success and Failure

Students' attributions for success and failure were examined at both pre-test and post-test. The CSR Plus group received an enhanced treatment through attributional feedback on their strategy use and reading comprehension performance to make them aware of the link between strategy use and achievement. The feedback was provided to see whether it could modify students' attributions for success and failure. Only the CSR Plus group increased their level of strategy use attributions for both success and failure at post-test compared to the CSR and the Control group. In other words, the CSR Plus group attributed their failure and success to strategy use more at post-test.

With respect to the question on the impact of the intervention on modifying students' attributions for success and failure, no significant increase was found in the Intervention groups' overall internal and external attributions. However, the significant effect of the intervention was found in the strategy use factor. That is, for strategy use attributions, the CSR and the CSR Plus groups were significantly different from the Control group in attributing their success to strategy use at post-test. Additionally, the Wilcoxon test findings indicated that the CSR Plus group increased their strategy use attributions for success and failure from the pre-test to post-test, whereas, the Control and the CSR group did not change significantly. Moreover, the results showed

that the attributional feedback on students' strategy use and performance did not change students' attributions in the CSR Plus group overall. That is, students' attributions for success and failure as a whole did not change from the pre-test to the post-test because of the feedback, whereas their strategy use attributions did. There may be plausible explanations for this finding.

First, once students in the CSR Plus group received feedback on reading comprehension performance and strategy use, their awareness of how to use strategies successfully had been raised as reported in the qualitative data. This means that students believed that success or failure in reading comprehension activities depends on factors which they can control, factors which come from inside and also factors which can be improved or changed. This confirms the effectiveness of the attributional feedback, as it was able to make the CSR Plus students link their success and failure to strategy use. Therefore, the aim of the study to make students perceive the link between strategy use and reading comprehension performance was successfully achieved.

For the overall attributions, results indicated that they did not change, except for the Control group, becoming less likely to attribute success to external causes. One explanation for that might be related to the length of the present study. That is, students' attributions for their outcomes may take time to change longer than ten weeks -the length of the present study-. The change in the Control group's attributions might be attributed to the lack of a strategy instruction and an attributional feedback intervention. In other words, because the Control group were not exposed to any instruction, their external attributions for success significantly decreased at post-test, meaning that they thought that their successful outcomes are within themselves.

6.3 Students' Perceptions of the CSR and the Attributional Feedback Intervention

6.3.1 The CSR Intervention

Data gathered from both the quantitative and qualitative tools seem to provide evidence for the effectiveness of the CSR approach in the students' eyes. From questionnaires, the interview, and the learning logs, participants in the CSR and the CSR Plus group perceived the CSR training positively. That is the majority of participants (81.5%) agreed that the CSR was effective. They commented that the CSR made them able to differentiate the main idea of a text from the supporting details, fix up the difficult words and easily use different strategies.

In view of all that was mentioned by the participants, one may suppose that this approach provided them with an environment which helped them to interact with their peers, exchange ideas, and thus improve their reading comprehension scores (Zoghi et al., 2010) as well as their confidence in undertaking different reading comprehension activities. Through group work activities, learners would work hard to achieve the success of the whole group by putting in more effort, take their own responsibility and thus enhance their learning autonomy. Students also expressed the view that their language skills such as vocabulary were improved. This finding is in agreement with those of Fan (2015) which showed that students perceived the CSR intervention positively. They believed that it had an impact on their reading comprehension achievements and learning autonomy. Conversely, only very few students argued that working in groups did not benefit them. They claimed that the size of the group distracted them from concentration, and that role assignment did not help them to be fully engaged in the reading comprehension activities.

The qualitative findings on the CSR and the CSR Plus group's perceptions of the CSR approach supported the quantitative data. Participants commented that the CSR strategies were

effective in improving their reading comprehension performance and self-efficacy as they made them more organized in dealing with the reading comprehension tasks provided. For the negative perceptions, there was a view that not all members within the group were serious and contributed properly, and that reduced the benefits of the approach for them.

Overall, once learners worked in groups, they believed that the CSR provided them with effective strategies to successfully undertake the reading comprehension activities. Students' autonomy to tackle the language activities seemed to have also been promoted within the group-work activities, which then helped them to improve their reading comprehension, and thus their sense of self-efficacy. Nevertheless, despite the fact that the CSR and the CSR Plus groups benefited from the CSR, they reported in the questionnaires and the interview that they faced some difficulties when being exposed to the intervention. The biggest difficulty students referred to was the lack of interaction and communication with the group members, noise, and their unfamiliarity with the CSR approach (questionnaire data). From the qualitative data, students also referred to the lack of communication, difficult words and absenteeism of some members. This negatively affected the group work activities as learners were assigned particular roles to perform in the group. Students also mentioned that they found difficulties with the successful implementation of some of the strategies used before, during and after reading. Those difficulties might support finding on the lack of correlation between students' reading comprehension performance and self-efficacy perceptions reported in Section 6.2.3.

6.3.2 The Feedback Intervention

Participants in the CSR Plus group held a positive view about the enhanced attributional feedback treatment they received. The questionnaire data revealed that the respondents liked the

feedback (57.1%). They believed that it positively affected their motivation to read, and hence their reading comprehension performance and self-efficacy. The teacher's feedback provided suggestions for the successful application of the strategies, and thus learners believed they improved their performance and confidence in the activities provided. This supports the views of Mercer et al. (2012) who claimed that attributional feedback is commonly perceived to have an impact on motivation, self-efficacy, as well as performance. These views that the intervention was helpful in enhancing students' performance were further confirmed by the quantitative data.

For students' perceptions of the feedback on altering their success and failure attributions, the overall questionnaire responses seemed to show that it was helpful (just over half of the participants expressed this view). In their learning logs, when students were asked to think about future plans to improve the use of the CSR strategies, many students referred to their own plans, except for three students who relied on the teacher's comments. This indicated that the feedback increased their awareness to take responsibility for their own learning, and thus their learning autonomy. According to Vygotsky (1978), social interaction has a vital role in learning. That is, within the CSR approach, students were given opportunities to take responsibility of their own learning by assigning them roles to perform within the group work activities. They were also able to think about their own ways to improve the use of the CSR strategies. This indicated their understanding of the strategies, so that they planned for improving their skills in applying them. In other words, the attributional feedback made learners more responsible for their own learning by raising their awareness about the use of the strategies, and hence have control over their own learning.

6.4 Chapter Summary

In summary, a discussion of the quantitative and qualitative data to answer each of the research questions in relation to previous literature has been provided in this chapter. The quantitative results revealed that the Intervention groups significantly outperformed the Control group in their reading comprehension performance as well as their sense of self-efficacy. This confirms the effectiveness of the intervention the CSR and the CSR Plus group underwent, however, analysis revealed that reading comprehension performance and self-efficacy perceptions were not correlated for the CSR and the CSR Plus group at post-test. The reading comprehension scores for the CSR group were better than the self-efficacy scores, whereas, for the CSR Plus group, self-efficacy perceptions improved more than their reading comprehension performance. Additionally, while the effectiveness of the intervention on students' reading comprehension performance lay within the low proficiency students, high and low attaining students benefited in the same manner from the intervention with regards to their sense of self-efficacy.

The effectiveness of the attributional feedback, the intervention integrated for the CSR Plus group only, led to improvement in the self-efficacy perceptions of the CSR Plus group. That is, the CSR Plus group significantly outperformed the CSR group in their level of self-efficacy at post-test, but not for reading comprehension achievement. This result coincides with changes in attributing success and failure in the CSR Plus group to strategy use at post-test. The attributional feedback on performance and strategy use provided students with guidelines and suggestions for the successful application of the CSR strategies. This then seemed to allow them to perceive the link between reading comprehension achievements and strategy use. The latter is an internal, controllable and improvable factor and thus may have contributed to the higher level of self-efficacy of the CSR plus group. Therefore, the teacher's attributional feedback was significant in helping students to link

their success and failure to strategy use and thus increased their reading comprehension performance and levels of self-efficacy.

Moreover, the qualitative data gathered from the semi-structured interview and the learning logs supported the quantitative results. That is, from the qualitative data, it was found that the CSR and the CSR Plus groups enjoyed reading more at post-test, and that they used more reading strategies to tackle the different reading comprehension activities compared to the Control group. Additionally, the Intervention groups attributed their success and failure to the internal, controllable, and changeable factor (strategy use) at post-test, although this tendency was more pronounced with in the CSR Plus group.

Furthermore, the quantitative and qualitative data support the claim that the CSR instruction and the attributional feedback were effective in influencing students' reading comprehension performance, self-efficacy, and attributions. Students perceived both interventions positively, in which they expressed the belief that their reading comprehension performance, self-efficacy, and attributions were affected. Additionally, although students reported some difficulties they faced during the training sessions, this did not mean that they did not benefit from the intervention. It does denote however, that further improvement for the implementation of the CSR and feedback intervention is required for future studies. Therefore, the final chapter of this work is concerned with the limitations of the study, suggestions for future work, and the pedagogical implications of the CSR and the attributional feedback approaches.

CHAPTER SEVEN. CONCLUSION

7.1 Introduction

The final chapter of this thesis is divided into four parts. The first section provides a brief overview of the findings which emerged from the quantitative and qualitative analysis presented in the previous chapters. It then goes on to acknowledge the limitations of the present research project, and to propose some recommendations and suggestions for further research in the area of teaching reading comprehension to EFL learners. The final two parts move on to discuss the possible pedagogical implications, and contribution of the study to the field of teaching reading comprehension.

7.2 Summary of the Findings

The main purpose of this study was to develop an understanding of the level of reading comprehension, self-efficacy perceptions, and success and failure attributions in the context of EFL university students in Algeria. Therefore, a summary of the main findings gathered from both the quantitative and the qualitative research tools is presented in this section.

There are several points related to the teacher's bias and roles to put into consideration before discussing the main findings of the intervention. The teacher researcher was a part of the intervention, which means that her role may have had an impact on the introduction of the intervention with students. That is, because the CSR Plus group received an enhanced treatment compared to the CSR and the Control group, the researcher might have unconsciously been more attentive to this group to achieve better results. Similarly, because the researcher anticipated that the treatment implemented with the CSR and the CSR Plus would be more effective, this also may have contributed to her bias in the training sessions.

Accordingly, in order to avoid bias-related problems, the researcher paid attention to certain points before the implementation of the intervention. First, for the sample selection, the Control and the Intervention groups were randomly selected, and each individual within the whole population had an equal chance to be in the Control or the Intervention group. Additionally, at the very beginning of the treatment sessions, the researcher wrote lesson plans and adhered to them when delivering the lessons with each of the Control and the Intervention groups.

Second, blinding was also another way followed to avoid bias. That is, students were not informed that they were in the Control or the Intervention group, in order to minimise a Hawthorne effect during the study. In addition, in all sessions the teacher researcher was just a facilitator. She provided guidance and assistance when needed for example with more explanation for the CSR strategies or the comprehension questions without trying to affect students' responses.

Moreover, in order to minimise bias in the quantitative and qualitative data collection tools, the researcher was also cautious when administering them. For instance, there were open questions to participants in the questionnaires, the learning logs and the interview to avoid directing respondents towards agreement or disagreement. Although there were closed questions in the English Reading questionnaire and the evaluation questionnaire, they were not leading questions.

Furthermore, the reading comprehension test and the placement test were blindly evaluated. The researcher did not look up the names of the students while marking the tests. Students were required to avoid writing their names, but rather provided their ID number. This made it difficult for the researcher to remember the number and thus the name of each student, and thereby, gave marks in an objective way.

The present study followed a quasi-experimental research design, which aimed to examine the possible effects of the CSR and the attributional feedback on Algerian EFL students' reading comprehension proficiency, self-efficacy perceptions, and success and failure attributions. A mixed method approach combining both quantitative and qualitative data collection tools was adopted. Participants were recruited from an Algerian university, in the faculty of literature and foreign languages, department of English language. Three classes, totalling 104 second year students, were randomly divided into a Control and two Intervention groups. One Intervention group was referred to as CSR Plus and received training on the use of the CSR strategies, combined with feedback on the use of reading strategies and reading comprehension performance. Another Intervention group called the CSR group was exposed only to the CSR approach instruction. By contrast, the Control group's teaching sessions were only based on a whole class correction of reading comprehension activities with the teacher.

In order to examine the impact of the intervention on students' reading comprehension performance and self-efficacy perceptions, both parametric and non-parametric tests were used, yet, they yielded the same results. With regards to the impact of the intervention on students' reading comprehension performance, a standardized reading comprehension test was delivered at both pre-test and post-test to all groups. Changes in scores were compared using two-way mixed ANOVA tests. In sum, this study has shown a main effect of program, with the Intervention groups making the greatest improvement, as well a main effect of time, in which students' scores at post-test were higher than at pre-test. Analysis also revealed a significant time*program interaction. Further analysis of the interaction using post-hoc comparisons with Bonferroni correction indicated that at pre-test, there was a significant difference between the Control group and the CSR group in reading comprehension scores, a non-significant difference between the CSR Plus and the Control group,

and between the CSR and the CSR Plus group. At post-test, the CSR and the CSR Plus group significantly outperformed the Control group in their reading comprehension scores, whereas, the CSR and the CSR Plus did not differ significantly. Additionally, the Control group did not make improvement from the pre-test to post-test, but both CSR and CSR Plus groups improved their reading comprehension scores from the pre-test to post-test. The results from ANOVA were confirmed when Time 1 reading comprehension scores was entered as a covariate.

For the impact of the instruction and students' proficiency level on reading comprehension performance, results showed that for the low proficiency learners, the Intervention groups significantly outperformed the Control, however the CSR and the CSR Plus did not differ significantly. No such differences were found between the high proficiency learners in the three groups.

The qualitative data in the present study provided important insights into the impact of the intervention on students' reading comprehension performance. The CSR and the CSR Plus groups reported that the intervention made them enjoy reading in English more than they did before, and that it provided them with different ways to deal with the language obstacles encountered in the reading comprehension tasks.

Regarding the self-efficacy perceptions level, students in the three groups were asked to reflect on their confidence in reading comprehension tasks using a questionnaire by recording a number from 0 (cannot do at all) to 100 (highly certain they can do). Results of the two-way mixed ANOVA indicated a main effect of time, in which students' level of self-efficacy was higher at post-test than at pre-test. There was also a main effect of program with the Intervention groups making the greatest improvement. Analysis showed also a significant time*program interaction, in which the instruction influenced participants' self-efficacy level in the Control and the Intervention

groups differently. Post hoc tests with Bonferroni correction were undertaken to investigate this interaction further. The level of self-efficacy did not differ significantly between groups at pre-test, but there was a significant difference at post-test. Post hoc tests revealed that the CSR group significantly differed from the Control group at post-test. The same was true for the difference between the Control and the CSR Plus group, and between the CSR and the CSR Plus group. Additionally, while the Control group's self-efficacy scores did not increase significantly from the pre-test to post-test, the CSR and the CSR Plus did. The results from ANOVA were confirmed when Time1 self-efficacy scores were entered as a covariate.

A 2*3*2 ANOVA test was run to examine whether an interaction effect existed between students' proficiency level and program on students' self-efficacy perceptions. Results indicated that the impact of the intervention on students' self-efficacy perceptions did not differ by proficiency level. That is, the intervention had a similar effect on higher and lower attaining students' self-efficacy perceptions regardless of the program.

As regards the qualitative findings on the impact of the intervention on students' self-efficacy perceptions, analysis indicated that there was a change in the use of the CSR strategies by the Intervention groups. The Intervention groups showed persistence when faced with difficulties compared to the Control group, which might also be another reason for their increase in the self-efficacy perceptions scores. For the CSR Plus group attaining the highest level in self-efficacy perceptions, this might be attributed to the feedback they received, and which might have made them link more their reading comprehension performance to strategy use.

The non-parametric Spearman's rank order test was run to determine whether there was a correlation between students' reading comprehension and self-efficacy scores. Contrary to expectations, this study did not find a significant correlation between the Intervention groups' post-

test reading comprehension performance and self-efficacy perceptions. Furthermore, while the correlation between reading comprehension scores and self-efficacy grew stronger for the Control group at post-test, in the Intervention groups the correlation was weaker at post-test than it was at pre-test. Additionally, while the CSR group's improvement in reading comprehension was higher than their self-efficacy, the self-efficacy scores improvement was better than reading comprehension or the CSR Plus group.

In the case of whether the attributional feedback modified students' attributions for success and failure in reading comprehension activities, an English Reading Questionnaire was used. Ten items in the questionnaire were used to measure students' attributions for both success and failure, with six items referring to internal attributions, and four statements measuring external attributions. That is, students were asked to circle a number from 1 (strongly disagree) to 6 (strongly agree) on how they felt about effort, strategy use, ability, task difficulty, luck, grammar and vocabulary, motivation and tiredness, and perseverance as factors for their successful or unsuccessful attainments in the reading comprehension activities. The overall analysis indicated that attributions did not change, except for the Control group who showed a change in attributions over time, becoming less likely to attribute success to external causes.

The CSR Plus group received an enhanced treatment which is attributional feedback on their reading comprehension performance and strategy use, therefore, analysis for the strategy use factor was run separately. Findings showed that there was a significant improvement in attributing both success and failure to strategy use at post-test for the CSR Plus group.

The qualitative data also revealed that the attributional feedback instruction implemented with the CSR Plus group allowed them to link their reading comprehension performance to strategy use more than the other two groups at post-test. The teacher's suggestions and guidelines on the use

of the CSR strategies helped them to modify their attributions for success and failure to strategy use factor. The feedback provided may have also raised their awareness of the link between strategy use and attainments in the reading comprehension activities.

The present study also sought to address student' perceptions of the CSR and the attributional feedback interventions. There were eight items in the evaluation questionnaire which measured their positive perceptions of the CSR approach instruction. The overall responses seemed to be positive, in which far over half of the participants (81.5%) commented that the CSR intervention was effective. For the negative perceptions, the highest percentage (15.7%) was found when students were asked to reflect on the impact of the group work discussion on their understanding of the text. The 11 respondents agreed that when they were engaged in group discussions, their understanding of the text decreased.

In the qualitative data, positive perceptions were also shown by the participants. They acknowledged the effectiveness of the strategies in enhancing their reading comprehension performance. They suggested that the CSR is a good way to teach reading comprehension. It made them more organized in dealing with the reading comprehension tasks, and that they liked the CSR strategies.

Participants in the CSR Plus group were asked to reflect on the attributional feedback treatment they received. Over half of the respondents indicated that the feedback was helpful in improving their reading comprehension performance (68.6%), that they liked the feedback (57.1%), and that the feedback on their strategy use helped them to change their causal attributions for success and failure (54.3%).

Relatively few students expressed negative perceptions of the feedback training sessions. Out of 35 participants, eight expressed the view that the feedback negatively affected their reading comprehension performance. Additionally, five and four students respectively commented that it decreased their performance, the feedback they received was not enough to influence their reading comprehension performance, nor their use of the reading strategies.

The three interviewees from the CSR Plus group reported their positive perceptions of the attributional feedback teaching sessions. It was easy for them to understand it, and it helped them to improve the use of the strategies, and thus their overall level in the reading comprehension activities. They reported also that the teacher's guidelines and instructions were fruitful for the improvement of the use of the CSR strategies, and thus their overall level in the reading comprehension tasks.

Students were asked in an open question about the biggest difficulty they encountered when being exposed to the CSR and the attributional feedback intervention. The majority (41.43%) of the respondents indicated that they did not face any difficulty, whereas only few students referred to certain difficulties such as the miscommunication between group members when working collaboratively, and their unfamiliarity with the CSR strategies.

7.3 Limitations and Suggestions for Future Work

7.3.1 Limitations

The current research study was limited in several ways. First, the most important limitation lies in the fact that the design of the study was only a pre-test to post-test intervention. There was no delayed post-test to investigate the long-term effects of the CSR and the attributional feedback on students' reading comprehension, self-efficacy, and attributions for success and failure. The data

collection phase was initiated in the last two weeks of the first semester and continued until the last week of the second semester. Students where the data were collected were required to start their exams during this period, and they were not available after this period. It was also impossible for the researcher to have a delayed post-test because students were not assigned to the same groups as they were in their year (second year) when the data were collected. They were randomly assigned to different groups in their third year. Therefore, this study is limited by the lack of information on the long-term effects of the intervention implemented.

Secondly, another limitation is that the sample size was not big enough, in which only 35 students were included in the Intervention groups. This makes it difficult to generalize the findings of the present study in relation to both CSR and attributional feedback instruction. Therefore, to develop a full picture of this approach, additional studies with a bigger number of participants will be needed.

Thirdly, the current investigation was limited in the use of a reading comprehension test, an interview, a questionnaire, and learning logs. To assess students' reading comprehension performance, the same standardized reading comprehension test was used at both the pre-test and post-test. The test included only multiple-choice reading comprehension questions, therefore, it only measured students' performance in this type of questions rather than other types of questions such as short-answer questions, true or false questions, and essay questions. For the assessment of students' attributions for success and failure, there was a use of a self-reported questionnaire. The latter may not always depict what students really think about; they instead may have reported not very reliable answers. Therefore, one source of uncertainty about the effectiveness of the intervention is in the methods used to measure students' reading comprehension proficiency, and attributions for success and failure.

Moreover, the findings of this study are limited by the use of a small number of diaries submitted by the CSR Plus group. Students in the CSR Plus group were asked to submit diaries to the researcher to gain in depth insight about the effectiveness of this intervention. However, only few students submitted the requested number (three diaries in total). Therefore, the generalisability of the results of the attributional feedback training is subject to the limited number of diaries submitted to the researcher.

Finally, the length of the intervention in the present study was rather short. All training sessions were conducted over eight sessions in total (both the CSR and the attributional feedback), which might be one reason for the participants not changing their overall success and failure attributions for the reading comprehension tasks. That is, modifying students' causal attributions may take longer than the training classes students in the present study received.

7.3.2 Suggestions for Future Research

A number of possible future studies could be carried out in the field of collaborative strategic reading approach and attributional feedback, as this research study has thrown up many questions in need of further investigation. For instance, further research regarding the role of the CSR approach and attributional feedback on students' reading comprehension performance, self-efficacy perceptions, and success and failure attributions including a delayed post-test would be worthwhile.

Additionally, further research needs to examine more closely the links between individual differences such as age and gender, and reading comprehension performance, self-efficacy perceptions, and success and failure attributions. This would be an important issue to add to the literature whether the effectiveness of the CSR and the attributional feedback would affect students

of different gender or age in a similar or a different way. The present study, for example, was conducted to determine the effects of the CSR and the attributional feedback approach with adult learners. Therefore, it would be interesting to assess the effects of this approach with younger learners in the middle or secondary school where English is taught.

Furthermore, future trials should assess the impact of the CSR and the attributional feedback using a larger sample. The latter would be helpful in obtaining more reliable data on the approach, and hence allow to make a generalisability of the findings. Moreover, more research is also needed to replicate the study in the same context over a longer period of time using a longitudinal research study.

Students in the present study were assigned to group work activities as the CSR approach requires. However, the sense of self-efficacy and the reading comprehension performance were measured for individuals only within the group. A further study with more focus on the effect of the CSR on the group's efficacy as well as the reading comprehension performance is therefore suggested. Since students were required to work in small groups, it might be possible to look at the self-efficacy level at the level of the group, but not individual self-efficacy of each member within the group.

Finally, further research in this field would be of great help if a wider range of research tools were used to measure reading comprehension performance and attributions for success and failure. The use of qualitative tools such as field notes and observations would give more insights into the nature of collaboration among learners, their rotation of roles, their application of the CSR strategies taught as well as the teacher's comments and suggestions in the use of the strategies.

7.4 Pedagogical Implications

The findings of the present study suggest a number of pedagogical implications in the teaching of reading comprehension to EFL learners in Algeria, particularly, at a university level. Notwithstanding the limitations of the present study, its findings indicated a beneficial role of the CSR and the attributional feedback in enhancing students' reading comprehension performance, self-efficacy perceptions, as well as modifying success and failure attributions with respect to strategy use.

An implication for these findings is the possibility that a teaching program should be designed to develop reading comprehension performance, by focussing on directing students' attention towards the effectiveness of reading strategies. The latter can make the process of comprehending a text easier and enhance students' positive judgments of their abilities in dealing with reading comprehension activities. In this vein, teachers should instruct students explicitly on the use of strategies in the classroom activities through strategy instruction or training. However, one of the issues that emerged from the present study's findings is that students reported that they did not get enough practice in the use of the CSR strategies. Thereby, teachers should allow sufficient time for students to practise the strategies in the classroom, so that students can benefit from the use of those strategies.

Moreover, the findings have important implications for directing the attention of EFL teachers in Algeria to group work activities in the classroom. This can give students more opportunities to take responsibility for their own learning instead of a large class teacher-centred environment. Group work activities may also create a less anxious environment for students to work in the foreign language classroom, and thus improve their performance as well as their sense of self-efficacy.

Furthermore, the present study raises the possibility that teachers in Algeria should change their teaching methods from a teacher-centred approach to a more learner-centred approach. This emphasizes learners' autonomy in the classroom by refining the teachers' and the learners' roles. The teacher can be a facilitator and the learners should take more responsibility for their own learning. This might be done by designing materials for students to work in groups in the reading classes.

The findings of the present study on the effect of the CSR on students' self-efficacy perceptions provide some support for the effectiveness of the collaborative work activities and the use of the strategies in enhancing students' sense of self-efficacy. It can therefore be assumed that teachers should provide an appropriate environment to help students foster their sense of self-efficacy through group work activities. Therefore, teachers should pay attention to grouping students by proficiency level which might create opportunities for learners to observe their peers' performance which might then enhance their sense of self-efficacy in language classroom activities. There is, therefore, a definite need for students to be provided with opportunities to observe their peers' success, so that their sense of self-efficacy may increase. Once they observe a more proficient role model's success, their positive beliefs about their abilities to perform similar tasks in the future may increase.

The combination of findings of this study provides some support for the link between feedback and causal attributions for success and failure. That is, to help students ascribe adaptive attributions by, for example, giving them feedback which directs their attention towards the link between performance and internal, controllable and changeable factors such as strategy use in the language classroom activities.

Finally, the present study has added to our understanding about the association between strategy use, attributions, performance, feedback, and self-efficacy perceptions. In other words, teachers should provide feedback to direct students' attention towards the link between strategy use, reading comprehension performance, and self-efficacy perceptions. Despite the fact that the link between feedback and attributions was not strong in the present study because of the short time of the intervention, there still a need to incorporate the teacher's feedback in the language classroom activities.

7.5 Contribution of the Study

The present study makes several noteworthy contributions. First, it attempted to contribute to the field of language teaching and reading comprehension more specifically. The empirical findings have gone some way towards enhancing our understanding of the link between strategy instruction, performance, and self-efficacy beliefs, and hence provide additional evidence with respect to strategy instruction in the language classroom.

Second, this study contributes to existing knowledge on CSR by providing more empirical evidence that suggests that a CSR approach has a beneficial role in enhancing students' reading comprehension performance. It also extends our knowledge about the impact of the CSR in an EFL context with adult learners, and not just with young learners in an L1 context, the setting and participants with which most of the previous studies have been conducted. Therefore, this study makes a major contribution to research on CSR in an EFL context by demonstrating its effectiveness in enhancing adult learners' L2 reading comprehension performance.

Moreover, it provides more insights into the importance of integrating the teacher's feedback in language learning classrooms. In the present study, the attributional feedback was

provided on the strategy use factor for the CSR Plus group. The findings revealed that this Intervention group linked both their success and failure to strategy use more than the Control and the CSR group at post-test. The CSR Plus students also significantly outperformed the Control group in both reading comprehension and self-efficacy perceptions, and had significantly higher self-efficacy perceptions than the CSR group. This confirms the importance of combining strategy instruction and attributional feedback for enhancing performance, self-efficacy perceptions, and altering attributions for success and failure.

Additionally, the current findings add to a growing body of literature on students' attributions, and self-efficacy perceptions. They support the findings of Chodkiewicz and Boyle (2016), who found that high self-efficacy learners make adaptive attributions, and link their learning outcomes to internal, changeable, and controllable factors such as strategy use. The CSR Plus group in this study were found to have the highest scores in self-efficacy perceptions, and they were more likely to link their success and failure to strategy use at post-test compared to the Control and the CSR groups.

From a theoretical perspective, the present study gives support to the field of language learning strategies and models of self-regulated learning such as that of Zimmerman (2013). Once learners are provided with multiple strategy instruction, this gives them an opportunity to monitor and have control over the use of strategies based on the aim of the different tasks. As language learning strategies promote self-regulated learning, learners can use better strategies and monitor the use of those strategies to accomplish the challenging goals they set in the forethought phase (Zimmerman, 2013). The use of the strategies is scaffolded and monitored through teacher's feedback, which then shows them that the strategies can be modified. Students therefore display

more positive reactions to the tasks by making strategy use attributions in the self-reflection phase (Zimmerman, 2013), and hence increase their outcomes and levels of self-efficacy.

Finally, this study has demonstrated, for the first time, that the CSR and the attributional feedback approach can boost students' reading comprehension and sense of self-efficacy, as well as directing students' attention towards the link between strategy use and performance in reading comprehension activities in an Algerian EFL context. Consequently, these findings should make an important contribution to the field of teaching reading comprehension in Algerian EFL classes. Taken together, these findings suggest a major contribution to the field of teaching reading comprehension to adult learners in an L2 context more broadly.

7.6 Chapter Summary

The purpose of the current study was to determine the effect of the CSR and the attributional feedback on students' reading comprehension performance, self-efficacy perceptions, and success and failure attributions of EFL Algerian university students. This final chapter draws upon the entire thesis, giving a summary of the main findings, and includes a discussion of the limitations with recommendations for future research. Finally, the pedagogical implications and the contributions of the findings to the area of reading comprehension are also identified in this chapter. Accordingly, it is hoped that the findings of the present study will help in the teaching of reading comprehension through the CSR and attributional feedback instruction in the Algerian and other similar EFL contexts.

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APPENDICES

Appendix A. Placement Test

Placement test

Grammar and Vocabulary

Circle the correct answers.

- 1 ___ you interested in sport?
A Be B Am C Is D Are
- 2 My ___ is a writer and his books are very popular.
A aunt B uncle C sister D mother
- 3 We live in the city centre and our house ___ have a big garden.
A doesn't B isn't C aren't D don't
- 4 There ___ a lot of people outside the school. What's the problem?
A are B is C be D am
- 5 Cathy ___ a game on her computer at the moment.
A plays B is playing C to play D play
- 6 Paul is very ___. He doesn't go out a lot.
A bored B confident C angry D shy
- 7 ___ you like to come out with us tonight?
A Do B Would C Are D Will
- 8 Dad's ___ work right now. He's a teacher.
A on B at C for D by
- 9 Did you ___ shopping after school yesterday?
A went B goed C going D go
- 10 There wasn't milk for breakfast this morning so I had toast and orange juice.
A a B some C the D any
- 11 I ___ five emails before school today.
A sent B sended C did send D was send
- 12 Turn ___ and you'll see the museum on the left.
A on the right B rightly C by the right D right
- 13 The beach was very crowded ___ Monday.
A in B on C at D to
- 14 I ___ the new Batman film yet. Is it any good?
A haven't seen B didn't see C don't see D am not seen
- 15 Tom got the ___ marks in the class for his homework.
A worse B worst C baddest D most bad
- 16 You ___ eat all that cake! It isn't good for you.
A don't B may not C should not D will not
- 17 How ___ time have we got to do this exercise?
A long B many C much D quick
- 18 Don't forget to get ___ the bus at Station Road.
A out B off C over D down
- 19 Our teacher speaks English to us ___ so that we can understand her.
A slow B slower C more slow D slowly
- 20 My sister ___ speak French when she was only six years old.
A was B should C could D had
- 21 I really enjoy ___ new languages and I'd like to learn Italian soon.
A to learn B learning C learn D learned
- 22 My father has been a pilot ___ twenty years and he still loves his job.
A since B for C until D by
- 23 Quick – get the food inside! It ___ any moment.
A rains B is raining C is going to rain D can rain
- 24 Sam asked me if I ___ a lift home after the concert.
A had wanted B wanted C would want D want
- 25 Which train ___ for when I saw you on the platform on Sunday?
A did you wait B were you waiting C have you waited D are you waiting
- 26 I ___ not be home this evening. Phone me on my mobile.
A can B could C may D should
- 27 I hope you ___ a good time at the moment in Greece! Phone soon.
A are having B have C have had D had
- 28 If we ___ in the countryside, we'd have much better views than we do now.
A lived B were live C would live D live

- 29 Do students in your country have to stand ____ when the teacher arrives?
A on B at C in D up
- 30 You ____ hurry as we've still got twenty minutes before the film starts.
A mustn't B can't C may not D needn't
- 31 I ____ you in the café at about 4.30 and we can discuss our plans then, OK?
A 'll see B am going to see C am seeing D see
- 32 I wanted to see Harry. How long ago ____?
A he left B has he left C did he leave D could he leave
- 33 I wish Joe ____ to Hawaii on holiday. They're talking about an eruption there on the news.
A doesn't go B didn't go C hasn't gone D hadn't gone
- 34 Could I possibly ____ some money for the bus fare home? I've lost my bag.
A lend B owe C borrow D need
- 35 People say that an avalanche ____ by loud noises in the area but I don't know if that's true.
A causes B has caused C is causing D is caused
- 36 You'll have to drive much ____ than this if you want to pass your test.
A carefuller B more careful C more carefully D careful
- 37 I must remember ____ Ed to take notes for me while I'm away next week.
A ask B to ask C asking D for asking
- 38 I ____ for arriving so late but I was caught up in a traffic jam in the town centre.
A sorry B regret C apologise D afraid
- 39 I'm sorry to trouble you but I was wondering what ____.
A time it is B the time was C is the time? D was the time?
- 40 I really wish people ____ dump litter in front of our house. We have to clear it up every day.
A won't B wouldn't C haven't D don't
- 41 Last Tuesday the company told Ruth that they'd emailed her the job details the ____ day.
A last B before C previous D earlier
- 42 The studio lights went out while the footballer ____.
A had been interviewed B was interviewed C was being interviewed D was interviewing
A 'll be working B 'll have been working C have worked D 'll work
- 43 Jonah's just fallen down the steps outside and there's ____ everywhere.
A bone B blood C skin D cut
- 44 You should be very proud ____ what you've achieved over the last year.
A of B on C to D for
- 45 ____ people know this but our school is being inspected today.
A Little B Any C None D Few
- 46 Look out for a petrol station because I think we're going to run ____ of petrol soon.
A down B out C off D through

Mark: ___/46

Reading

Read the text.

An unusual job!

Have you seen a football match recently? If you have, I'm sure that you heard lots of comments about the referee as well as about the players! Referees have a very difficult job. They have to make quick and important decisions in the middle of a fast-moving game. And, of course, there are thousands of people shouting at them too. The crowd is never happy when the ref sends off their favorite player. Also, in football today there still isn't the same technology as there is in other sports, like tennis. The job can get even more difficult when you're a woman who is refereeing a men's match!

There is no reason why there should not be the same number of male and female referees in the sport today. However, the number of female refs is still very low – particularly at the highest levels of professional football. This is something that one woman, Pat Dunn, who died in 1999, would have been very sad about.

Pat was the first woman in the UK to referee a men's football match but she wasn't allowed to do this for a long time. Pat was a strong supporter of women's rights in sport and became President of the Ladies' Football Association in 1969. Then she decided to train to be a referee. For a long time the Football Association refused to give her a certificate although she had passed the exams. But Pat continued fighting and she finally got permission in 1976. The next month she became famous when she refereed her first official FA game. Pat became a very good and successful referee and even saved a footballer's life. She helped him when he was injured during a match!

Today there are some famous female referees, like Bibiana Steinhaus from Germany who has just refereed the final of the Women's Football World Cup. Bibiana decided to become a referee at the age of 16 and later was the first female referee in the German men's professional league. But there are only a few like her.

Football is still mainly a men's game – both for players and referees. But for how long? Will we see more women referees in the future? We'd like to know what YOU think. So, please go online and leave a comment on our website. We'll print the most interesting ones in the magazine next week.

1 Are the sentences true (T) or false (F)?

- The article is from a magazine. ___
- The writer says that women are better referees than men. ___
- Pat Dunn is still alive today. ___
- Pat didn't get her referee certificate immediately. ___

2 Choose the best answers.

- Referees have a difficult job because...
 - they need to run fast.
 - the players shout at them.
 - they have to think quickly.
- In the sport of tennis...
 - they use more technology.
 - there are more women players.
 - there are bigger crowds.
- Who was Pat Dunn?
 - A woman football player.
 - A nurse at football matches.
 - An important member of the Ladies' Football Association.
- When was the first female referee in the UK appointed?
 - 1969
 - 1976
 - 1999

Mark: ___/8

Writing

Imagine you went to your capital city on a day trip. Write an e-mail to your friend telling him/her about the day. Include information about the journey there, the people you went with, what you did and what you bought.

Mark: ___/10

Total: ___/64

Appendix B. Reading Comprehension Test

This section is designed to measure your ability to read and understand short passages similar in topic and style to those that students are likely to encounter in North American universities and colleges. This section contains reading passages and questions about the passages.

Leonardo da Vinci was born on April 15, 1452 in Vinci, Italy. He was the illegitimate son of Ser Piero, a Florentine notary and landlord, but lived on the estate and was treated as a legitimate son.

In 1483, Leonardo da Vinci drew the first model of a helicopter. It did not look very much like our modern day “copter,” but the idea of what it could do was about the same.

Leonardo was an artist and sculptor. He was very interested in motion and movement and tried to show it in his art. In order to show movement, he found it helpful to study the way things moved. One subject he liked to study was birds and how they flew. He spent many hours watching the birds and examining the structure of their wings. He noticed how they cupped air with their wings and how the feathers helped hold the air. Through these studies, Leonardo began to understand how birds were able to fly.

Like many other men, Leonardo began to dream of the day when people would be able to fly. He designed a machine that used all the things he had learned about flight, and thus became the first model of a helicopter.

Poor Leonardo had only one problem, however. He had no way to give the necessary speed to his invention. You see, motors had not yet been invented and speed 19 was an important part of the flying process. It would be another four hundred years before the engine was invented and another fifty years before it was put to the test in an airplane. Leonardo’s dream of a helicopter finally came to pass in 1936.

The Italian painter, sculptor, architect, engineer, and scientist, Leonardo died on May 2, 1519, and was buried in the cloister of San Fiorentino in Amboise.

1.	What is the author’s main point?	
	A.	The invention of the helicopter.
	B.	Birds cup air with their wings and use feathers to help hold the air.
	C.	An overview of one of Leonardo da Vinci’s many skills.
	D.	Leonardo da Vinci was born in 1452 and died in 1519.

2.	The word ‘problem’ in paragraph five could best be replaced by the word:	
	A.	dilemma
	B.	mistake
	C.	danger
	D.	pain
3.	The word ‘it’ in paragraph two refers to:	
	A.	Leonardo da Vinci
	B.	The first model helicopter
	C.	1483
	D.	motion and movement
4.	Which paragraph explains why Leonardo’s helicopter was not successful in his lifetime:	
	A.	paragraph 1
	B.	paragraph 2
	C.	paragraph 4
	D.	paragraph 5
5.	The word ‘illegitimate’ in paragraph one is closest in meaning to:	
	A.	against the law or illegal
	B.	not in correct usage
	C.	incorrectly deduced; illogical
	D.	born out of wedlock
	A.	paragraph 3
	B.	paragraph 4
	C.	paragraph 5
	D.	paragraph 2
6.	What was the main problem with Leonardo’s invention?	
	A.	motors were not yet invented
	B.	the birds lost their feathers
	C.	he was illegitimate
	D.	he couldn’t draw

7.	The word ‘they’ in the third paragraph refers to:	
	A.	the feathers
	B.	the birds
	C.	the studies
	D.	the wings
8.	In what year was the first helicopter flown	
	A.	1483
	B.	1452
	C.	1519
	D.	1936
9.	What two things did birds have that Leonardo da Vinci noticed helped them to fly?	
	A.	wings and beaks
	B.	feathers and talons
	C.	wings and feathers
	D.	cups and feathers
10.	The word ‘thus’ in the fourth paragraph could best be replaced by:	
	A.	Hence
	B.	After
	C.	Unsuitably
	D.	Inappropriately

Glass fibers are extremely strong; for their weight, they are stronger than steel. They are made by forcing molten glass through tiny holes called spinnerets. As many as four hundred spinnerets are placed together, and threads of glass much thinner than human hairs are drawn off at great speed—miles of thread per minute. As they speed along, the threads are coated thinly with a type of glue and twisted into a yarn. The glass fibers are used with plastics to make boats and car bodies. They are also woven into heavy cloth for window draperies and into strong belts for making tires stronger.

A special kind of glass fiber is causing a revolution in communications. A signal of light can be made to travel along the fiber for very long distances. By changing the quality of the light, many messages can be sent at once along one strand of glass. New office buildings are being “wired” with glass fibers as they are built. The glass fibers will be used to connect telephones and computers in ways that not long ago were either impossible or too expensive.

Glass wool traps air in a thick, light blanket of fibers. This blanket is then put into walls and ceilings to keep warm air in during the winter and cool air in during the summer.

To make glass wool, molten glass is fed into a spinning drum with many holes in it. As the glass threads stream out of the holes, they are forced downward by a blast of hot air and through a spray of glues. The threads are then further blown about to mix them up as they fall in a thick mat on a moving belt.

The glass we see through and drink out of has many, many other uses besides the ones described here.

11.	What was the author’s main purpose in writing the article?	
	A.	To inform you how special kinds of glass are made and used
	B.	To persuade you to investigate the many uses of glass beyond those mentioned in the article
	C.	To inform you about the strength of glass fibers
	D.	To inform you that glue is used to hold

		strands of glass together
12.	The word ‘special’ in the second paragraph is closest in meaning to:	
	A.	Distinct among others of a kind
	B.	Additional
	C.	Common
	D.	Species
13.	Glass fibers are made by forcing molten glass through:	
	A.	Spinners
	B.	Spiderets
	C.	Spinnerets
	D.	Spinets
14.	The word ‘changing’ in the second paragraph could best be replaced by the word:	
	A.	Altering
	B.	Boring
	C.	Bringing
	D.	Doing
15.	What are glass fibers woven into cloth for?	
	A.	Draperies
	B.	Cars and boats
	C.	Glasses
	D.	Glue
16.	The word ‘fed’ in the fourth paragraph means:	
	A.	To give food to
	B.	To minister to
	C.	To support
	D.	To supply
17.	The word ‘they’ in the second sentence of the first paragraph refers to:	
	A.	Human hair
	B.	Weight
	C.	Glass fibers
	D.	Yarn
18.	The word ‘it’ in the fourth paragraph refers to:	

	A.	Molten glass
	B.	Glass wool
	C.	Spinning drum
	D.	Holes
19.	The following sentence would best complete which paragraph? “This improvement in technology is expected to continue.”	
	A.	Paragraph 1
	B.	Paragraph 2
	C.	Paragraph 3
	D.	Paragraph 4
20.	A signal of what can be made to travel along fiber for very long distances?	
	A.	Heat
	B.	Wave
	C.	Wool
	D.	Light
21.	The word ‘spray’ in the fourth paragraph could best be replaced by the word:	
	A.	Shower
	B.	Blow
	C.	Spit
	D.	Force

For centuries, people have searched for a way to replace dead and decaying teeth with comfortable false teeth. Many materials have been used to make a set of false teeth. The teeth themselves should be made from a hard and durable material. They should be secured to a soft material, making them easy to wear. In the last two decades, dentists succeeded in making durable false teeth that are comfortable, too.

Two thousand years ago, the Etruscans made teeth out of animal bone and gold. These materials were used-with varying degrees of success-up to the 1700's. When George Washington was president, ivory from animals such as elephants became a popular material for false teeth. Doctors and inventors also tried silver, pearl, and agate, but teeth made from these materials were very expensive. Perhaps the most successful material was porcelain, invented by a Frenchman about two hundred years ago. White, strong, and resistant to decay, porcelain is still used today for making single teeth.

Besides finding a material for the teeth, inventors also had to find a way to secure them in a person's mouth. People tried wire, springs, and many kinds of glue to accomplish this. In most cases, however, discomfort and a likelihood of the teeth falling out plagued the person who wore them.

Around 1844, an American dentist named Horace Wells used laughing gas to put people to sleep before working on their teeth. This innovation made dental work a lot less painful. Soon after, an inventor created the first form of rubber. This was important to dentistry because teeth could be attached to the rubber, and the rubber could be molded to fit the shape of the mouth. With these two developments, dentist could work without causing pain and could fit teeth more carefully. False teeth have become more available and comfortable since then, and dentists have continued to improve the making and use of false teeth.

22.	What is the main topic of this passage?	
	A.	Horace Wells
	B.	False teeth
	C.	Gold and bone
	D.	The Etruscans
23.	The word 'they' in the first paragraph refers to:	
	A.	Teeth
	B.	Materials
	C.	People
	D.	Dentists
24.	The word 'varying' in the second paragraph could best be replaced by the word:	
	A.	Constant
	B.	Changeless
	C.	Fluctuating
	D.	Stable

25.	Porcelain was invented after the first use of:	
	A.	Rubber for holding for holding teeth in place
	B.	Laughing gas
	C.	Ivory for making teeth
	D.	Electric drills
26.	When did Horace Wells begin using laughing gas?	
	A.	1700
	B.	Two-thousand years ago
	C.	1834
	D.	1844
27.	The word ‘besides’ in the third paragraph means:	
	A.	In addition to
	B.	Stand next to
	C.	Anyway
	D.	Together
28.	The word ‘them’ in the third paragraph refers to:	
	A.	Teeth
	B.	Inventors
	C.	People
	D.	Wire
29.	When was rubber found to be a useful material for false teeth?	
	A.	After laughing gas was used to put patients to sleep
	B.	While George Washington was president
	C.	Before a Frenchman invented porcelain
	D.	While the Etruscans were making teeth of bone and gold

30.	The following sentence would best complete which paragraph? “It is unimaginable what will come next.”	
	A.	Paragraph 1
	B.	Paragraph 2
	C.	Paragraph 3
	D.	Paragraph 4
31.	The word ‘resistant’ in the second paragraph could best be replaced by the word:	
	A.	Prone
	B.	Insusceptible
	C.	Hearty
	D.	Sassy

The lens on a camera has only two tasks. First, it must gather in as much light as possible in order to activate the sensitive chemicals on the film. Second, it must organize the light rays so that they form a sharp image on the film. These may sound like simple tasks, but they are not.

One of the sharpest lenses is merely a pinhole in a sheet of cardboard, metal, plastic, or a similar material. If the pinhole is tiny enough, the image can be quite sharp, but then very little light is admitted. For most purposes, even the most sensitive film would take too long to record an image.

A glass lens is much better because it lets in much more light and focuses it on the film. Yet simple glass lenses are sharpest only in their centers. As more of the lens is used, the image suffers in sharpness.

One reason a simple lens can cause problems is that it is shaped like a section of a sphere. Spherical lenses do not focus perfectly on flat film, so the image is slightly distorted, especially at the edges. Another reason is that the lens can act partly like a prism. This means that some of the colors in the image will not focus properly, and the image will be fuzzy.

One solution is to block off all but the sharp-focusing center of the lens. If you block off the edges of the lens, however, less light will get to the film. Early lenses had to compromise between sharpness and light-gathering power.

Very sharp lenses that admit as much light as possible can be built by making them with several separate lenses, or elements. A multiple-element lens has from two to nine separate lenses. Some elements are cemented together, and some have a gap between them. Furthermore, the elements are often made of different kinds of glass, each with a different ability to bend light rays. Some of the elements are there just for correcting problems caused by the other elements! The results are worth it, though: pictures can be taken in many different light conditions, and they have a sharpness you can almost feel.

32.	The word ‘it’ in the first paragraph refers to:	
-----	---	--

	A.	Camera
	B.	Lens
	C.	Film
	D.	Chemicals
33.	The word 'distorted' in the fourth paragraph means:	
	A.	Out of a proper or natural relation
	B.	Clean and in shape
	C.	Purified, as one
	D.	Proper
34.	What is the main disadvantage of a simple lens that is made sharp by using just the center?	
	A.	With less light-gathering power, the lens is utterly useless.
	B.	With less light-gathering power, the lens is useful only in bright light.
	C.	With more light-gathering power, the lens is useful only in dim light.
	D.	With more light-gathering power, the lens is utterly useless.
35.	The word 'sharpest' in the third paragraph is closest in meaning to:	
	A.	Having clear form and detail
	B.	Terminating in an edge or a point
	C.	Intellectually penetrating; astute
	D.	Having a thin edge or a fine point suitable for or capable of cutting or piercing

36.	The word 'it' in the fourth paragraph refers to...	
	A.	Glass lens
	B.	Prism
	C.	Simple lens
	D.	Flat film
37.	The word 'ability' in the sixth paragraph could best be replaced by the word ...	
	A.	Ignorance
	B.	Weakness
	C.	Ineptness
	D.	Capacity
38.	The meaning of the word 'solution' as used in the fifth paragraph is closest in meaning to:	
	A.	A homogeneous mixture of two or more substances, which may be solids, liquids, gases, or a combination of these
	B.	The answer to or disposition of a problem
	C.	The state of being dissolved
	D.	Release; deliverance; discharge
39.	What is the minimum number of lenses in multiple-element lens?	
	A.	Nine
	B.	Two
	C.	Ninety-two
	D.	Twenty-nine
40.	The word 'fuzzy' in the fourth paragraph means:	
	A.	Clear
	B.	Unclear
	C.	Exact
	D.	Precise

Appendix C. Pre-test English Reading Questionnaire

I would appreciate your taking the time to complete this questionnaire about how you feel about undertaking reading comprehension activities. Your responses are voluntary, will remain confidential and will not affect your grades.

Think about specific aspects of your reading. Please chose the appropriate number that indicates how sure you are that you could perform the following English reading activities:

1. I can activate my background knowledge about what I already know about the topic

0-----10 -----20--- ---30-----40-----50-----60-----70-----80-----90-----100
 Not at completely
 sure sure

2. I can predict what the passage is about

0-----10 -----20--- ---30-----40-----50-----60-----70-----80-----90-----100
 Not at completely
 sure sure

3. I can identify the topic sentence of each paragraph in the passage

0-----10 -----20--- ---30-----40-----50-----60-----70-----80-----90-----100
 Not at completely
 all sure sure

4. I can identify the main idea of the text

0-----10 -----20--- ---30-----40-----50-----60-----70-----80-----90-----100
 Not at completely
 all sure sure

5. I can identify the meaning of difficult words

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

6. I can guess the meaning of a difficult word by breaking the word into smaller parts

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

7. I can determine the word's meaning by looking for prefixes and suffixes

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

8. I can use the context of the text to guess the meaning of unknown words

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

9. I can understand the specific details in the text

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

10. I can understand what I read

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

11. I can continue reading when faced with difficulties in the passage

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100
 Not at completely
 all sure sure

12. I can write a good piece of summary writing of the passage using my own words

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100
 Not at completely
 all sure sure

13. I can generate important questions about the important ideas in the passage

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100
 Not at completely
 all sure sure

14. Now think about what reasons might lie behind how well you are able to carry out reading activities.

Think about the occasions when you have been **less successful** with reading comprehension activities. Why have you been **less successful**, do you think? Circle the one number from 1 to 6 which best matches how you feel about each reason below.

I've been **less successful** with reading comprehension activities because:

1. I do not try very hard

1	2	3	4	5	6
Strongly disagree					Strongly agree

2. I use poor techniques or strategies

1	2	3	4	5	6
Strongly disagree					Strongly agree

3. I'm just not good at reading

1	2	3	4	5	6
Strongly disagree					Strongly agree

4. We are given difficult reading tasks

1	2	3	4	5	6
Strongly disagree					Strongly agree

5. It is just bad luck

1	2	3	4	5	6
Strongly disagree					Strongly agree

6. I am faced with difficult grammatical structures in the text

1	2	3	4	5	6
Strongly disagree					Strongly agree

7. I come across difficult vocabulary in the text each time

1	2	3	4	5	6
Strongly disagree					Strongly agree

8. I am just not motivated to read

1	2	3	4	5	6
Strongly disagree					Strongly agree

9. I feel tired whenever I want to read

1	2	3	4	5	6
Strongly disagree					Strongly agree

10. I just stop reading whenever I come across difficult words or passages in the task

1	2	3	4	5	6
Strongly disagree					Strongly agree

If there are other reasons, please write them here.....

.....

.....

.....

.....

15. Now think about the occasions when you have been **more successful** with reading comprehension activities. Why have you been **more successful**, do you think? Circle the one number from 1 to 6 which best matches how you feel about each reason below.

I've been more successful with reading comprehension activities because:

1. I try very hard

1	2	3	4	5	6
Strongly disagree					Strongly agree

2. I use good techniques or strategies

1	2	3	4	5	6
Strongly disagree					Strongly agree

3. I'm just good at reading

1	2	3	4	5	6
Strongly disagree					Strongly agree

4. We are given easy reading tasks

1	2	3	4	5	6
Strongly disagree					Strongly agree

5. It is just good luck

1	2	3	4	5	6
Strongly disagree					Strongly agree

6. I come across simple grammatical structures of the text

1	2	3	4	5	6
Strongly disagree					Strongly agree

7. I come across simple vocabulary in the text

1	2	3	4	5	6
Strongly disagree					Strongly agree

8. I am just motivated to read

1	2	3	4	5	6
Strongly disagree					Strongly agree

9. I just feel relaxed whenever I want to read

1	2	3	4	5	6
Strongly disagree					Strongly agree

Appendix D. Pre-test Guided Questions for the Semi Structured Interview (English and Arabic Version)

1. Do you enjoy reading?
2. Are there particular things you tend to do when you read to help you understand the text?
3. Do you face difficulties when you read in English? What are they?
4. When faced with difficulties in comprehending a text, do you continue or stop reading?
5. What do you generally do if you come across a difficult word while reading?
6. When you do well in reading comprehension activities, what do you think the reasons for that are? When you did not do well, what do you think the reasons for that are?

1. هل تستمتع بالقراءة؟

2. هل هناك أشياء معينة تميل إلى القيام بها عندما تقرأ لمساعدتك على فهم النص؟

3. هل تواجه صعوبات عند القراءة باللغة الإنجليزية؟ ما هي؟

4. عندما تواجه صعوبات في فهم النص، هل تستمر أو تتوقف عن القراءة؟

5. ماذا تفعل عادة إذا واجهت كلمة صعبة أثناء القراءة؟

6. عندما تقوم بتحصيل نتائج جد مرضية عند قراءتك لنص وإجابتك عن أسئلة الفهم الخاصة به، هي أسباب ذلك في رأيك؟ وعندما تحقق نتائج ضعيفة، هي أسباب ذلك في رأيك؟

Appendix E. Fixing up Clunks Learning Logs for the CSR and CSR Plus Group

Today's topic: Date:	The fixing up clunks strategies				
List of Clunks (difficult words)	Break the unknown word into smaller parts by looking for prefixes and suffixes within it	Use the context of the passage to guess the meaning	Look up the meaning of the clunk using a dictionary	Try to read the sentence containing the clunk without that word and check if you can understand the meaning from pieces of information provided in the text	Look for clues to understand the clunk by reading the sentences which precede and follow that sentence which contains the clunk
Clunk one:					
Clunk two:					
Clunk three:					
Clunk four:					
Clunk five:					

Adapted from Klinger and Vaughn (1998).

Appendix F. Learners' Roles Cue Cards

Front

Leader Cue Card #1

Before Reading

1. "We know that today's topic is _____."
2. "Let's brainstorm and write in our learning logs everything we already know about the topic."
3. "Who would like to share their best ideas?"
4. "Now let's predict. Look at the title, pictures, and headings and think about what we might learn today. Write your ideas in your learning logs."

The text on the cards has been reprinted with permission from Sopris West Educational Services. Collaborative Strategic Reading, by Janette Klingler, Sharon Vaughn, Joseph Dimino, Jeanne Schumm, and Diane Bryant, 2001.

Leader Cue Card #2

During Reading

1. "Who would like to read the section?"
2. Click and Clunk – "Did everyone understand what we read? If you did not, write your clunks in your learning log."
3. If someone has a clunk – "Clunk Expert, please help us out."
4. Get the Gist – "It's time to Get the Gist. Gist Expert, please help us out."
5. Repeat the steps on this card again for each section read.

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Leader Cue Card #3

After Reading

1. "Now let's think of some questions to check if we really understood what we read."
"Remember to start your questions with **who**, **when**, **what**, **where**, **why**, or **how**. Everyone write your questions in your learning log."
2. "Who would like to share their best question?"
3. "In our learning logs, let's write down as much as we can about what we learned."
4. "Let's go around the group and each share something we learned."

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Leader Cue Card #4

After Reading

Compliments and Suggestions

1. "The Encourager has been watching carefully and will now tell us two things we did really well as a group today."
2. "Is there anything that would help us do even better next time?"

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Front

Announcer Cue Card #1*Before Reading*

1. Call on at least two people to say what they know.
2. Call on at least two people to say what they think they will learn.
3. Call on different people to read.

Remember to make sure only one person talks at a time!

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Announcer Cue Card #2*During Reading*

1. *Clunks* – Call on students who have clunks.
2. Call on students to help fix clunks.
3. *Gists* – Call on one person to say the gist.
4. Call on at least one other person to say his or her version of the gist.

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Announcer Cue Card #3*After Reading*

1. Call on two students to share their best questions.
2. Call on students to answer the questions.
3. Call on all students to say something they learned.

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Front

Encourager Cue Card #1*Before Reading*

1. Brainstorm – Tell someone they did a good job saying what they already know.
2. Predict – Tell someone they did a good job saying what they think they will learn.

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Encourager Cue Card #2*During Reading*

1. Click and Clunk – Tell someone they did a good job figuring out a clunk.
2. Get the Gist – Tell someone they did a good job getting the gist.

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Encourager Cue Card #3*After Reading*

1. Wrap up questions – Tell someone they asked a good question.
2. Wrap up review – Tell someone they did a good job saying what they learned.

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Encourager Cue Card #4*After Reading*

1. Tell two things your group did well today.
2. Tell two things your group can do even better next time.

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Front

Gist Expert Cue Card

1. "What is the most important idea we have learned about the topic so far? Everyone think of the gist and write it in your learning log."
2. "Announcer, please call on someone to share their gist."
3. "Does anyone have a different gist they would like to share?"
4. "Announcer, call on someone else to share their gist."
5. Help your group come up with a gist that includes the most important information, leaves out details, and is ten words or less.

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Front

Clunk Expert Cue Card

1. "What is your clunk?"
2. "Does anyone know the meaning of the clunk?"

If YES

- a. "Please explain what the clunk means."
- b. "Does everyone understand now?"

If NO

- a. Read Clunk Card #1.

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Front

Timekeeper Cue Card #1*Before Reading*

1. "We have 1 minute and 30 seconds to write what we know."
2. "We have 1 minute and 30 seconds to write what we think we will learn."

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Timekeeper Cue Card #2*Before Reading*

1. Before the group begins reading each section say, "We have six minutes for this section."

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Timekeeper Cue Card #3*After Reading*

1. Before wrap up begins say, "We have five minutes to wrap up."
2. "We have two minutes to write our questions."
3. "We have 1 minute and 30 seconds to write what we learned."

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Available on

https://iris.peabody.vanderbilt.edu/wpcontent/uploads/modules/csr/pdfs/csr_11_LINK_cueCards.pdf#content, p 11

Appendix G. Reading Comprehension Passages Used with the Control, the CSR, and the CSR Plus Groups

Appendix H. Post-test English Reading Questionnaire

I would appreciate your taking the time to complete this questionnaire about how you feel about undertaking reading comprehension activities. Your responses are voluntary, will remain confidential and will not affect your grades.

Think about specific aspects of your reading. Please chose the appropriate number that indicates how sure you are that you could perform the following English reading activities:

1. I can brainstorm what I already know about the topic

0-----10 -----20--- ---30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

2. I can predict what the passage is about.

0-----10 -----20--- ---30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

3. I can identify the topic sentence of each paragraph in the passage

0-----10 -----20--- ---30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

4. I can identify the main idea of the text (get the gist)

0-----10 -----20--- ---30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

5. I can identify the meaning of unknown words (clunks)

0-----10 -----20--- ---30-----40-----50-----60-----70-----80-----90-----100

Not at completely
all sure sure

6. I can guess the meaning of a clunk by breaking the word into smaller parts

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely

all sure sure

7. I can determine the word's meaning by looking for prefixes and suffixes

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely

all sure sure

8. I can use the context of the text to guess the meaning of unknown words

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely

all sure sure

9. I can understand the specific details in the text

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely

all sure sure

10. I can understand what I read

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely

all sure sure

11. I can continue reading when faced with difficulties in the passage

0-----10 -----20-----30-----40-----50-----60-----70-----80-----90-----100

Not at completely

all sure sure

4. We are given difficult reading tasks

1	2	3	4	5	6
Strongly disagree					Strongly agree

5. It is just bad luck

1	2	3	4	5	6
Strongly disagree					

6. I am faced with difficult grammatical structures in the text

1	2	3	4	5	6
Strongly disagree					Strongly agree

7. I come across difficult vocabulary in the text each time

1	2	3	4	5	6
Strongly disagree					Strongly agree

8. I am just not motivated to read

1	2	3	4	5	6
Strongly disagree					Strongly agree

9. I feel tired whenever I want to read

1	2	3	4	5	6
Strongly disagree					Strongly agree

10. I just stop reading whenever I come across difficult words or passages in the task

1	2	3	4	5	6
Strongly disagree					Strongly agree

If there are other reasons, please write them here.....

.....

.....

.....

.....

15. Now think about the occasions when you have been **more successful** with reading comprehension activities. Why have you been **more successful**, do you think? Circle the one number from 1 to 6 which best matches how you feel about each reason below.

I've been more successful with reading comprehension activities because:

6. I try very hard

1	2	3	4	5	6
Strongly disagree					Strongly agree

7. I use good techniques or strategies

1	2	3	4	5	6
Strongly disagree					Strongly agree

8. I'm just good at reading

1	2	3	4	5	6
Strongly disagree					Strongly agree

9. We are given easy reading tasks

1	2	3	4	5	6
Strongly disagree					Strongly agree

10. It is just good luck

1 2 3 4 5 6

Strongly disagree

Strongly agree

6. I come across simple grammatical structures of the text

1 2 3 4 5 6

Strongly disagree

Strongly agree

7. I come across simple vocabulary in the text

1 2 3 4 5 6

Strongly disagree

Strongly agree

8. I am just motivated to read

1 2 3 4 5 6

Strongly disagree

Strongly agree

9. I just feel relaxed whenever I want to read

1 2 3 4 5 6

Strongly disagree

Strongly agree

10. I just continue reading whenever I come across difficult words or passages in the task

1 2 3 4 5 6

Strongly disagree

Strongly agree

If there are other factors, please write them here.....

.....
.....
.....

16. Are you?

Male

Female

Your participation is greatly appreciated.

Thank you very much for your cooperation

Appendix I. Post-test Guided Questions for the Semi Structured Interview (English and Arabic Version)

1. After being exposed to the CSR instruction, do you enjoy reading more that you did before?
2. How did you feel about the CSR instruction? Did it have any impact on how well you did in the reading comprehension activities? Did it have any impact on how confident you feel in reading? Why? Are there any changes you suggest to improve the instruction?
3. Do you prefer collaborative work or whole class work in dealing with reading comprehension tasks? Why?
4. Are there any particular things you tended to do when you were reading to help you understand the text?
5. Did you face any difficulties when you were dealing with the reading comprehension tasks? What are they? Did you continue or stop reading?
6. Did you find any of the four clusters difficult? Which was the most difficult?
7. How did you deal with the difficult words you faced while reading?
8. Did you face any difficulties when you were receiving the instruction? What were they?
9. How did you feel about the teacher feedback? How useful was it? Did it affect your overall performance in reading comprehension tasks? In what way? Are there any changes you suggest to improve the instruction?
10. When you did well in reading comprehension activities, what do you think the reasons for that are? When you did not do well, what do you think the reasons for that are?

1. بعد التعرض لتعليمات القراءة التعاونية الاستراتيجية ، هل تستمتع بقراءة المزيد الذي فعلته من قبل؟

2. ما هو شعورك حيال تعليمات القراءة التعاونية الاستراتيجية ؟ هل كان لها أي تأثير على مدى نجاحك في أنشطة فهم النص؟ هل كان لها أي تأثير على مدى ثقتك في قدراتك على فهم النص ؟ لماذا ؟ هل هناك أي تغييرات تقترحها لتحسين التعليمات؟

3. هل تفضل العمل الجماعي في مجموعات صغيرة أو العمل مع الصف ككل في حل تمارين قراءة و فهم النص؟ لماذا؟

4. هل هناك أي شيء معين تميل إلى القيام به عندما تقرأ لمساعدتك على فهم النص؟

5. هل واجهت أي صعوبات عندما كنت تقوم بحل تمارين قراءة و فهم النص ؟ ما هي؟ هل تابعت أم توقفت عن القراءة؟

- 6 - هل وجدت أي من الاستراتيجيات الأربع صعبة؟ ما هي الأكثر صعوبة؟
7. كيف تعاملت مع الكلمات الصعبة التي واجهتها أثناء القراءة؟
8. هل واجهت أي صعوبات عندما كنت تتلقى التعليمات؟ ما هي؟
9. ما هو شعورك تجاه تعليق الأستاذ على أجوبتك حول النص وحول استعمالك للاستراتيجيات؟ هل أثر ذلك على أدائك العام في مهام القراءة والفهم؟ هل هناك أي تغييرات تقترحها لتحسين التعليمات؟
10. ما هي في رأيك الأسباب التي ساعدتك على تحصيل نتائج جيدة أو غير مرضية في الأنشطة السابقة؟

Appendix J. Evaluation Questionnaire of Students' Perceptions of the CSR Intervention

The purpose of this questionnaire is to ask about your views on learning and reading in English, as well as your views on the reading instruction you have received. When filling out the questionnaire, please be as honest as possible because all your answers will be confidential, and you will remain anonymous. Your responses will not have any impact on your grades.

Section One: Students' General Perceptions of CSR

Please circle the number which describes your perceptions of the CSR instruction you have received.

	Strongly agree					Strongly disagree
1. Collaborative strategic reading (CSR) instruction is an effective method for teaching reading comprehension	1	2	3	4	5	6
2. My motivation to read in English has increased after the implementation of collaborative strategic reading (CSR) instruction	1	2	3	4	5	6
3. Being assigned a particular role within the group makes me less engaged in group work activities	1	2	3	4	5	6
4. I feel anxious to undertake reading comprehension tasks after the implementation of CSR instruction	1	2	3	4	5	6
5. Being assigned a particular role within the group makes me feel more responsible to take part in the reading activities	1	2	3	4	5	6
6. The size of the group work within the CSR instruction makes me concentrate less	1	2	3	4	5	6

7. I cannot achieve better results in reading comprehension tasks when working with my peers	1	2	3	4	5	6
8. I'm not skilful enough in writing a text summary after being exposed to CSR instruction	1	2	3	4	5	6
9. Reading strategies learned within the CSR approach are not effective in comprehending a reading passage	1	2	3	4	5	6
10. CSR helps me increase my skills in distinguishing the main idea of a text from the specific details	1	2	3	4	5	6
11. My oral and communication skills have been enhanced through the CSR approach	1	2	3	4	5	6
12. CSR instruction helps me use different ways to overcome the meaning of unknown words in the text	1	2	3	4	5	6
13. My reading comprehension performance decreases when engaged in group work activities	1	2	3	4	5	6
14. My grammatical knowledge has not improved after the implementation of CSR instruction	1	2	3	4	5	6
15. My vocabulary range has improved after the implementation of CSR instruction	1	2	3	4	5	6
16. I feel that I am the main focus of the learning process within the CSR	1	2	3	4	5	6
17. When I am engaged in group discussions, my understanding of the text decreases	1	2	3	4	5	6

Section Two: Difficulties Faced within the Implementation of the Instruction

18. Please, state the biggest difficulty you had when being exposed to the instruction?

.....
.....
.....
.....
.....
.....

Section Three: Personal Information

19. Are you:

Male

Female

Your Participation is highly appreciated

Thank you

Appendix K. Evaluation Questionnaire of Students' Perceptions of the CSR and the Attributional Feedback Intervention

The purpose of this questionnaire is to ask about your views on learning and reading in English, as well as your views on the reading instruction you have received. When filling out the questionnaire, please be as honest as possible because all your answers will be confidential, and you will remain anonymous. Your responses will not have any impact on your grades.

Section One: Students' General Perceptions of CSR

Please circle the number which describes your perceptions of the CSR instruction you have received

	Strongly agree					Strongly disagree
1. Collaborative strategic reading (CSR) instruction is an effective method for teaching reading comprehension	1	2	3	4	5	6
2. My motivation to read in English has increased after the implementation of collaborative strategic reading (CSR) instruction	1	2	3	4	5	6
3. Being assigned a particular role within the group makes me less engaged in group work activities	1	2	3	4	5	6
4. I feel anxious to undertake reading comprehension tasks after the implementation of CSR instruction	1	2	3	4	5	6
5. Being assigned a particular role within the group makes me	1	2	3	4	5	6

feel more responsible to take part in the reading activities						
6. The size of the group work within the CSR instruction makes me concentrate less	1	2	3	4	5	6
7. I cannot achieve better results in reading comprehension tasks when working with my peers	1	2	3	4	5	6
8. I'm not skilful enough in writing a text summary after being exposed to CSR instruction	1	2	3	4	5	6
9. Reading strategies learned within the CSR approach are not effective in comprehending a reading passage	1	2	3	4	5	6
10. CSR helps me increase my skills in distinguishing the main idea of a text from the specific details	1	2	3	4	5	6
11. My oral and communication skills have been enhanced through the CSR approach	1	2	3	4	5	6
12. CSR instruction helps me use different ways to overcome the meaning of unknown words for me	1	2	3	4	5	6
13. My reading comprehension performance decreases when engaged in group work activities	1	2	3	4	5	6
14. My grammatical knowledge has not improved after the implementation of CSR instruction	1	2	3	4	5	6
15. My vocabulary range has improved after the implementation of CSR instruction	1	2	3	4	5	6
16. I feel that I am the main focus of the learning process within the CSR	1	2	3	4	5	6

17. When I am engaged in group discussions, my understanding of the text decreases	1	2	3	4	5	6
--	---	---	---	---	---	---

Section Two: Students' Perceptions of Performance and Strategy Use

Feedback

Please circle the number which describes your perceptions of the feedback you received during the CSR instruction

	Strongly agree					Strongly disagree
18. I liked the feedback	1	2	3	4	5	6
19. The feedback negatively affected my reading comprehension	1	2	3	4	5	6
20. The feedback helped me feel more confident about reading	1	2	3	4	5	6
21. Feedback on performance decreased my performance in reading comprehension activities	1	2	3	4	5	6
22. Feedback on strategy use helped me to increase my reading comprehension performance	1	2	3	4	5	6
23. Feedback helped me to feel more motivated	1	2	3	4	5	6
24. The feedback helped me to use reading strategies more effectively	1	2	3	4	5	6
25. Feedback on strategy use changed what I feel about the reasons for doing well or not so well	1	2	3	4	5	6
26. Teachers should provide feedback on both their students' performance in reading comprehension and use of reading strategies	1	2	3	4	5	6

27. The feedback I received was not enough to influence my reading performance	1	2	3	4	5	6
28. The feedback I received was not enough to influence the use of appropriate reading strategies	1	2	3	4	5	6
29 I was not able to understand the feedback provided by the teacher	1	2	3	4	5	6
30. I was unhappy to receive feedback	1	2	3	4	5	6

Section Three: Difficulties Faced within the Implementation of the Instruction

31. Please, state the biggest difficulty you had when being exposed to the instruction?

.....
.....
.....
.....
.....
.....

Section Four: Personal Information

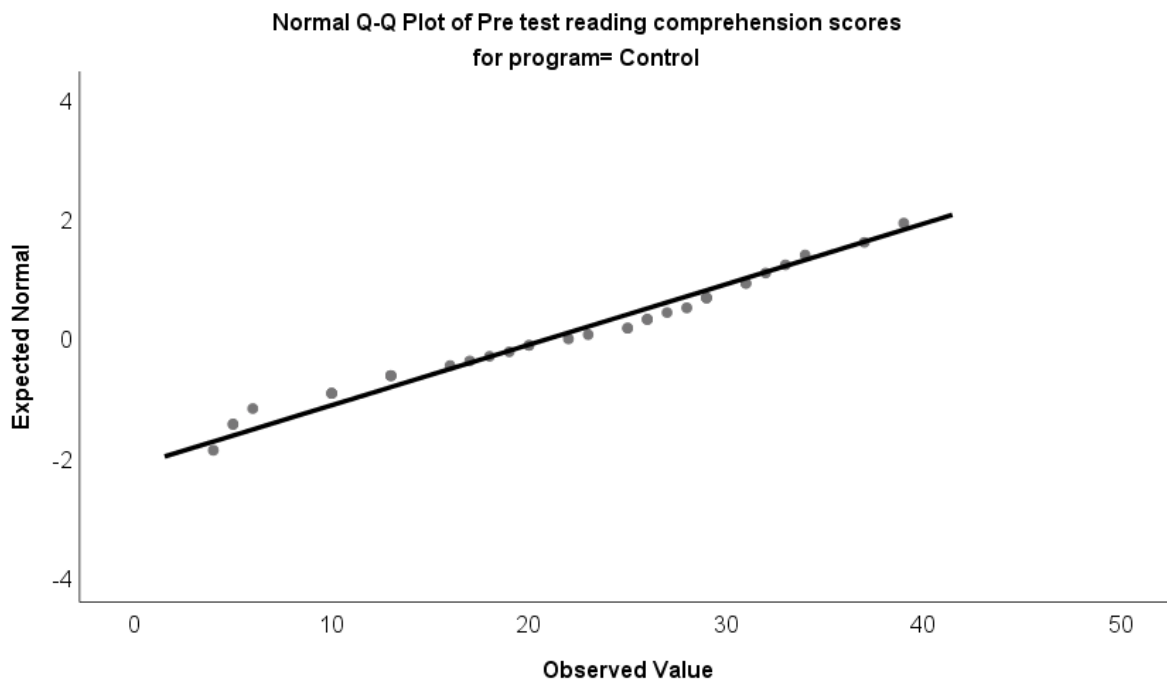
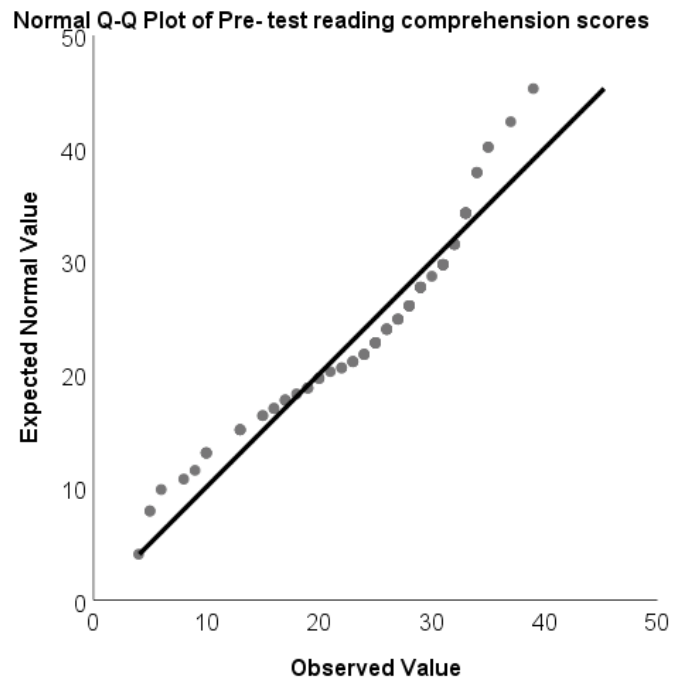
32. Are you:

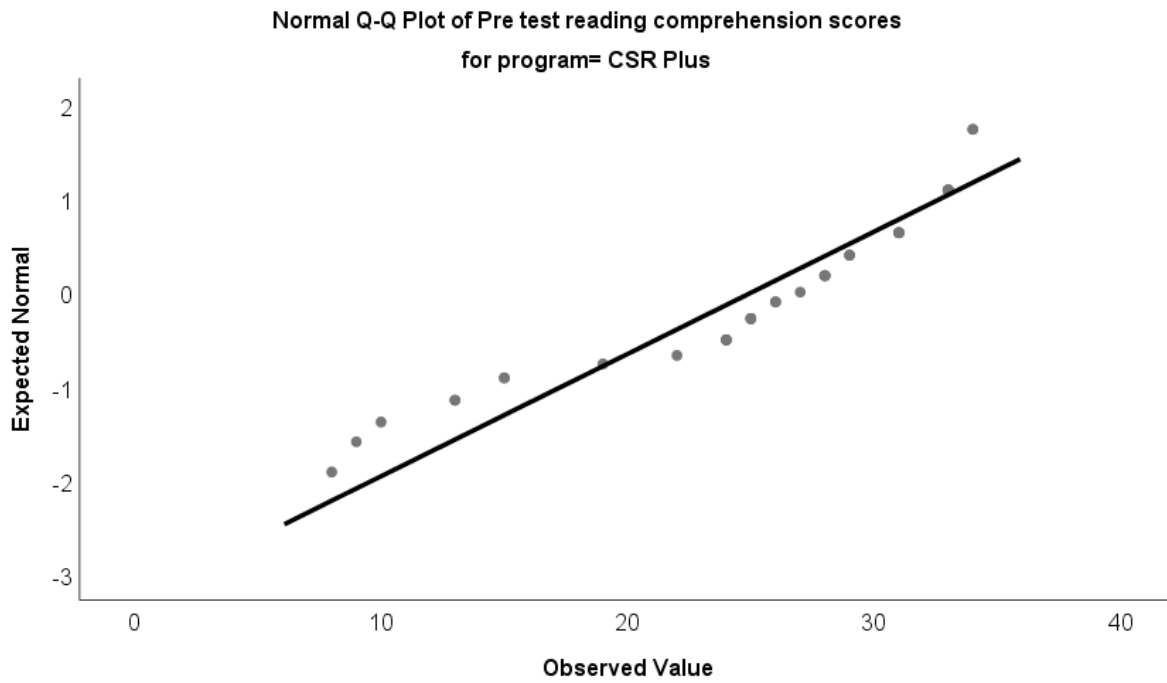
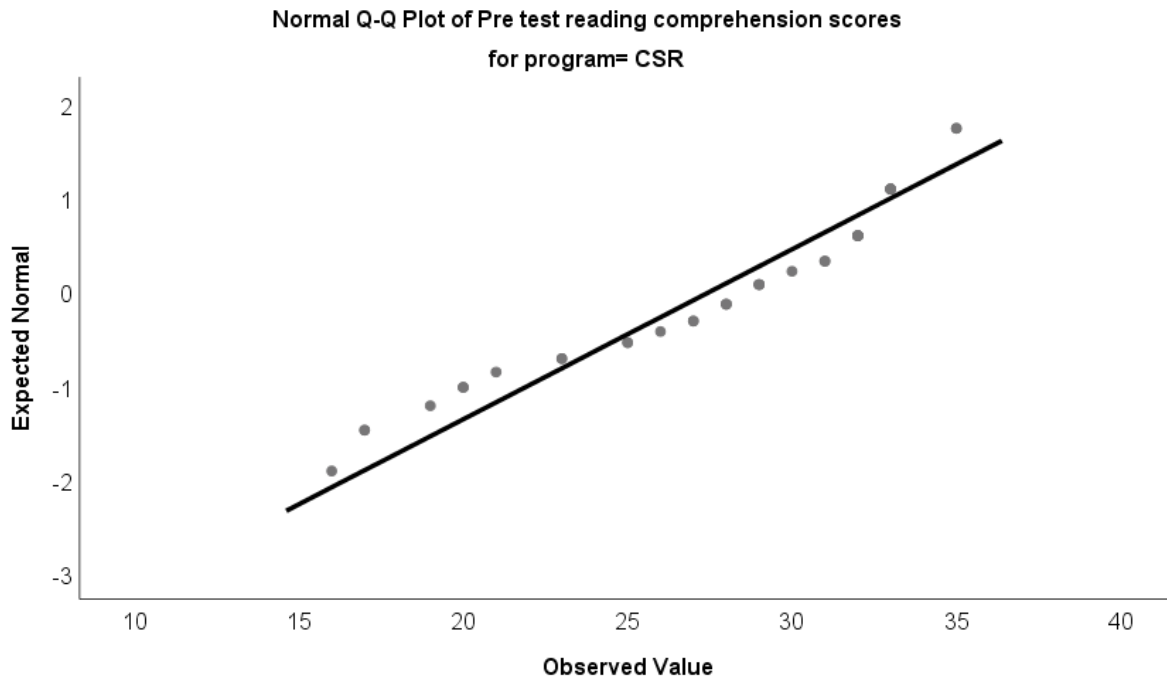
Male

Female

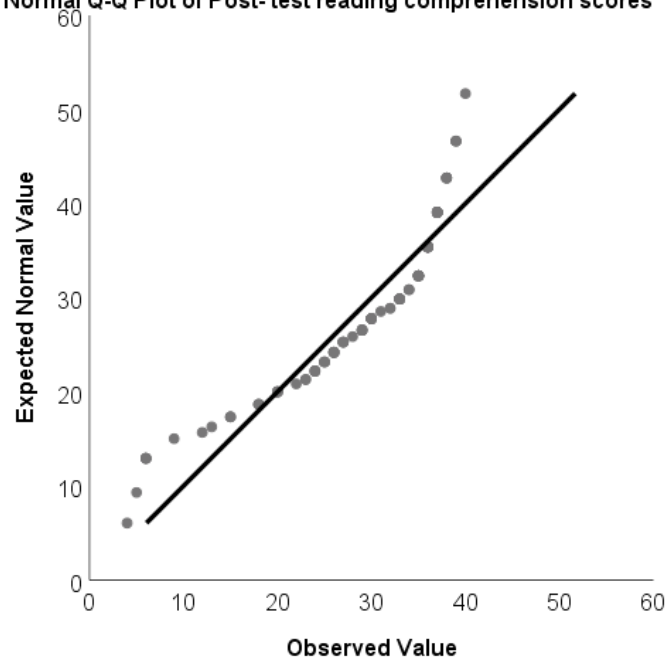
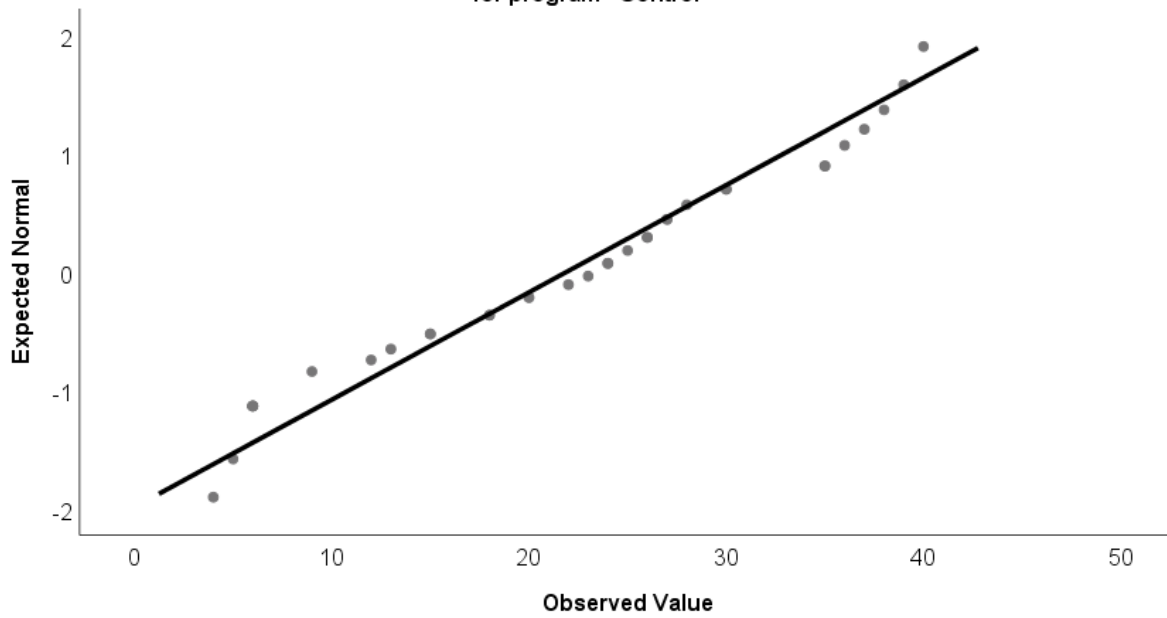
Your Participation is highly appreciated

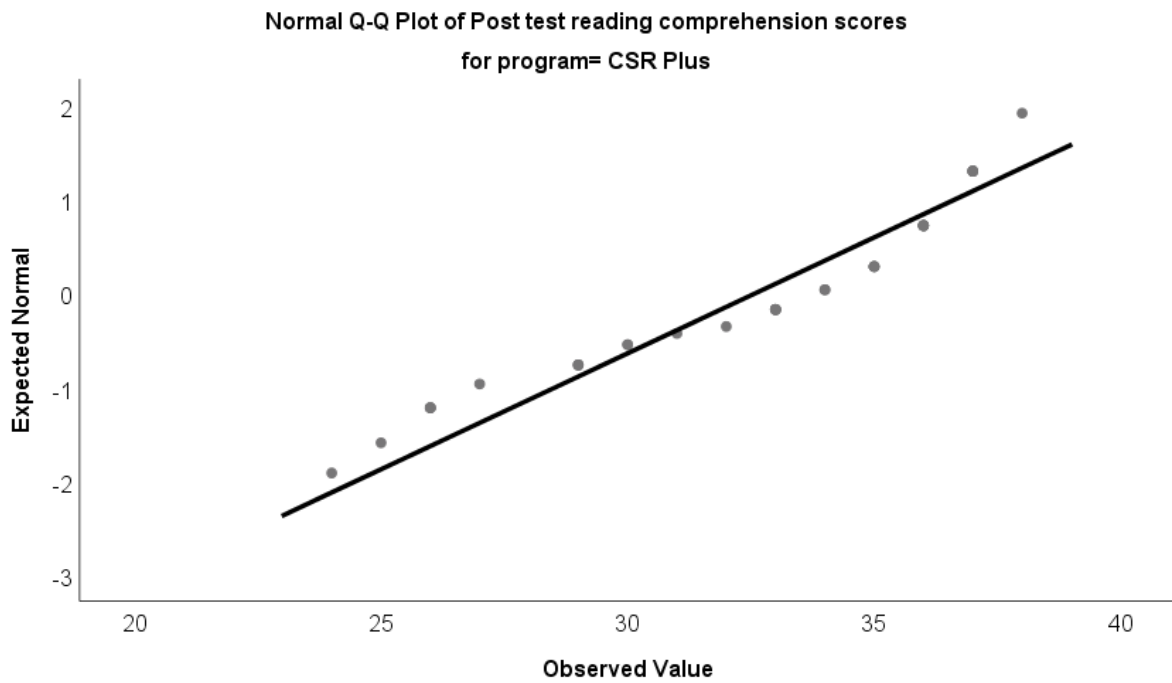
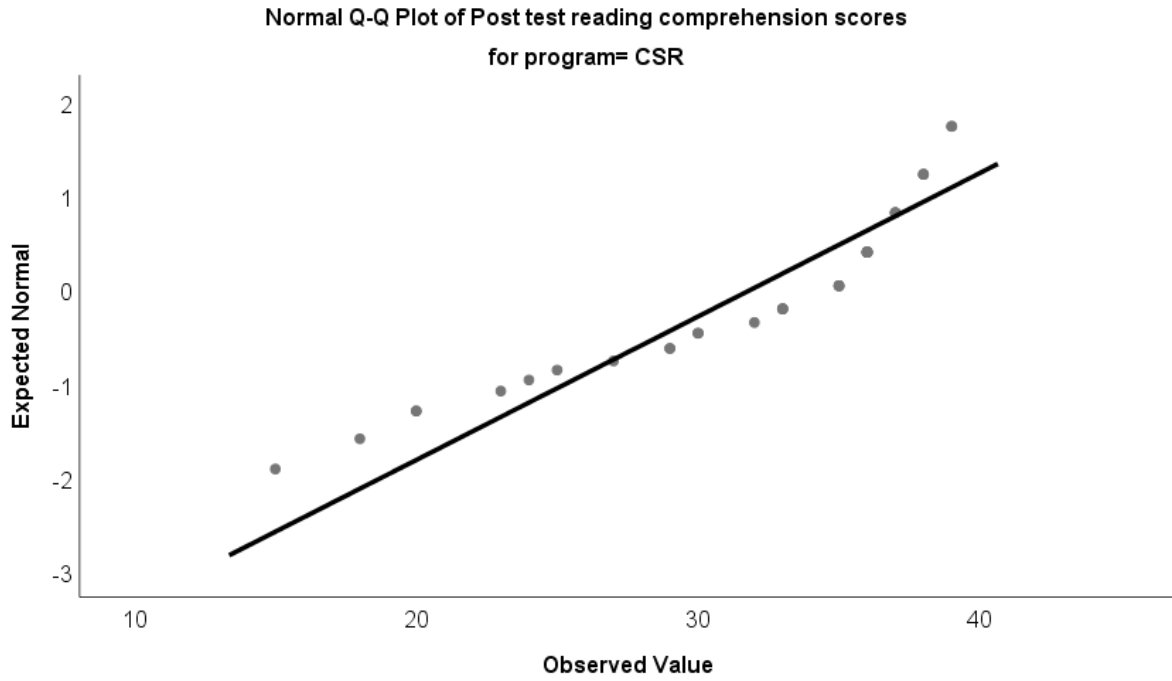
Thank you

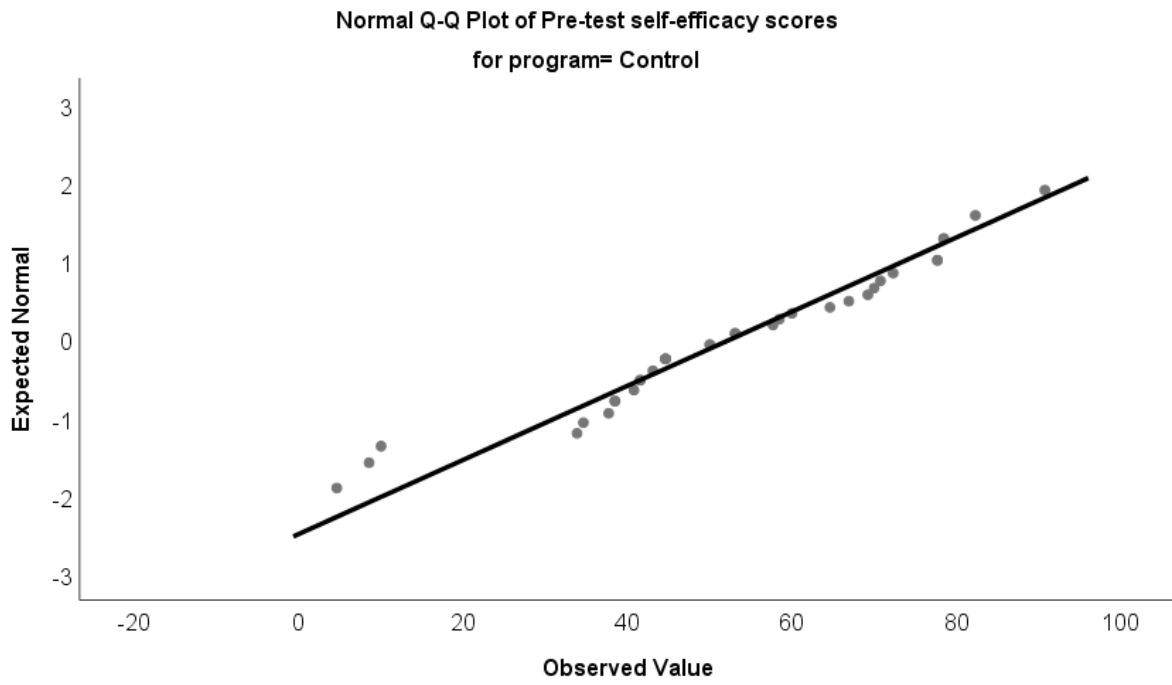
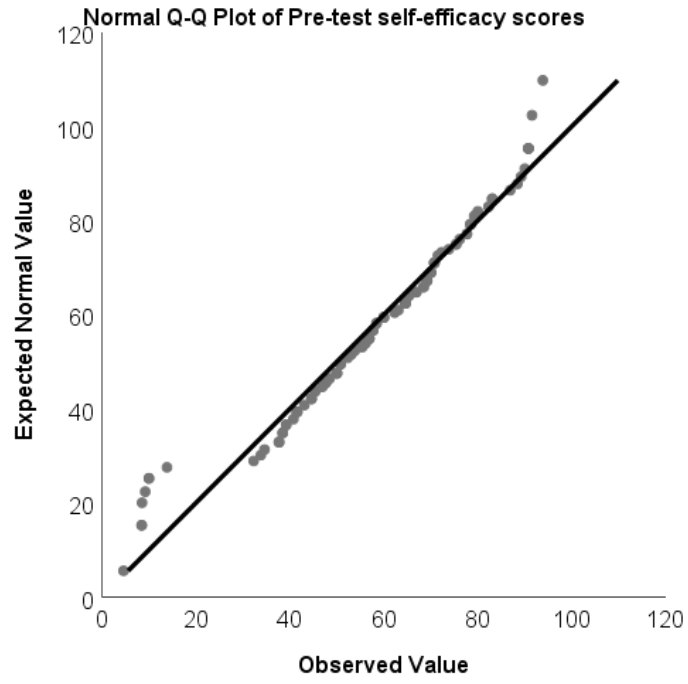
Appendix L. Q-Q Plots for Students' Reading Comprehension and Self-Efficacy Scores

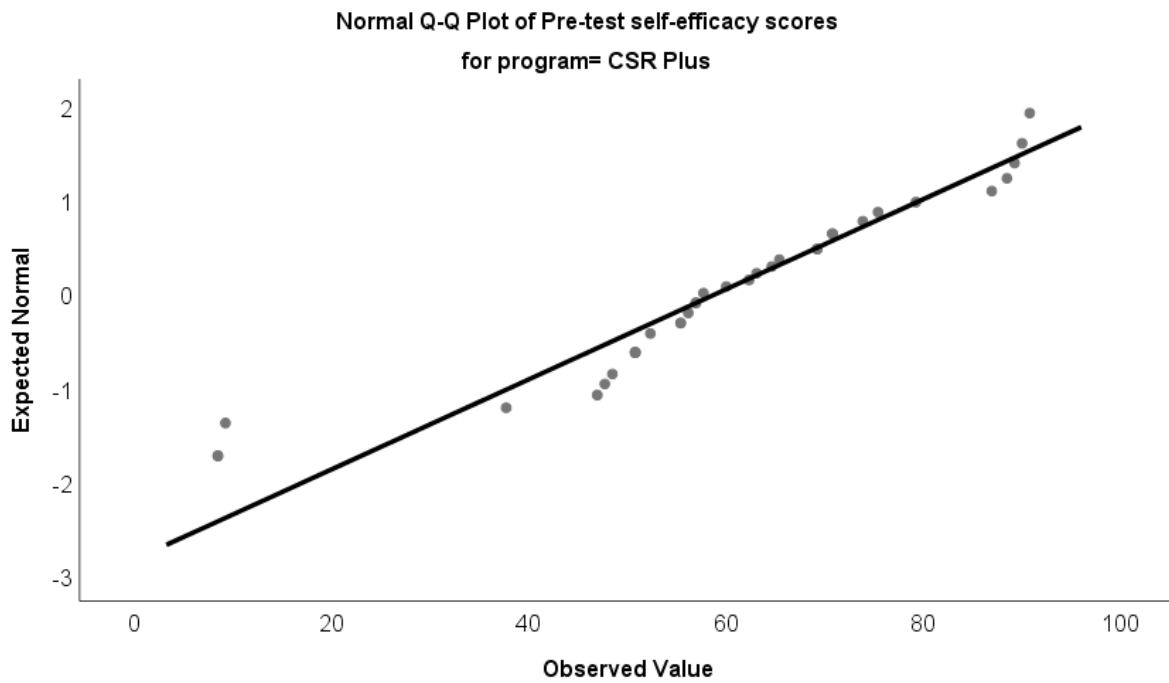
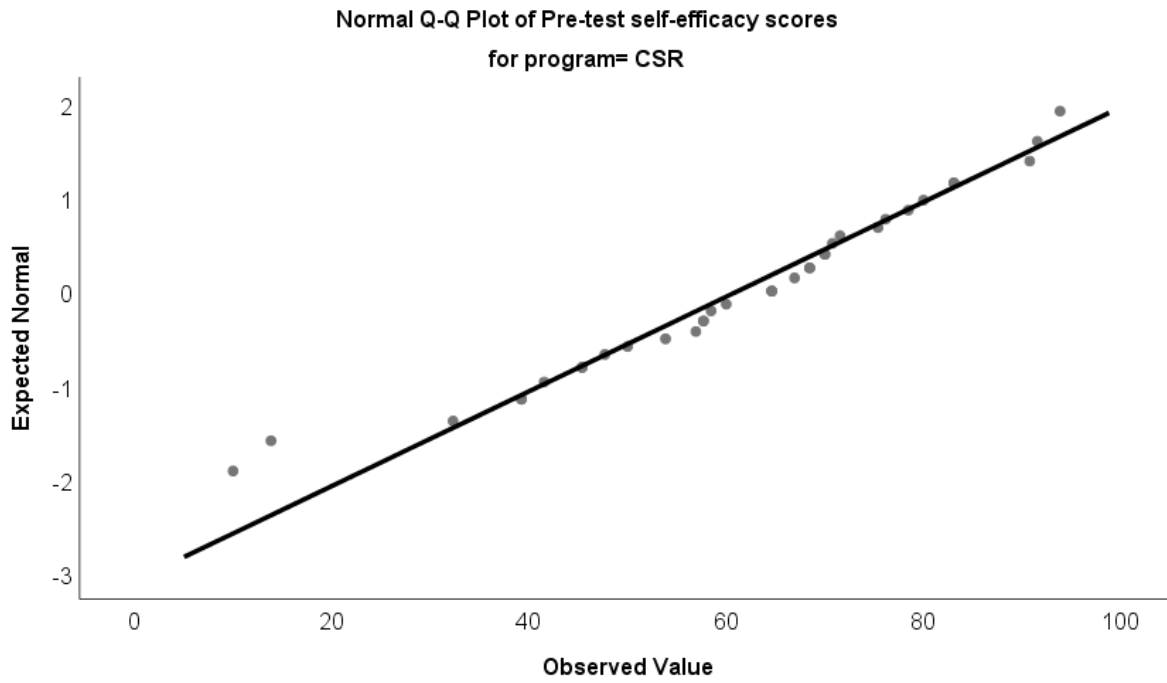


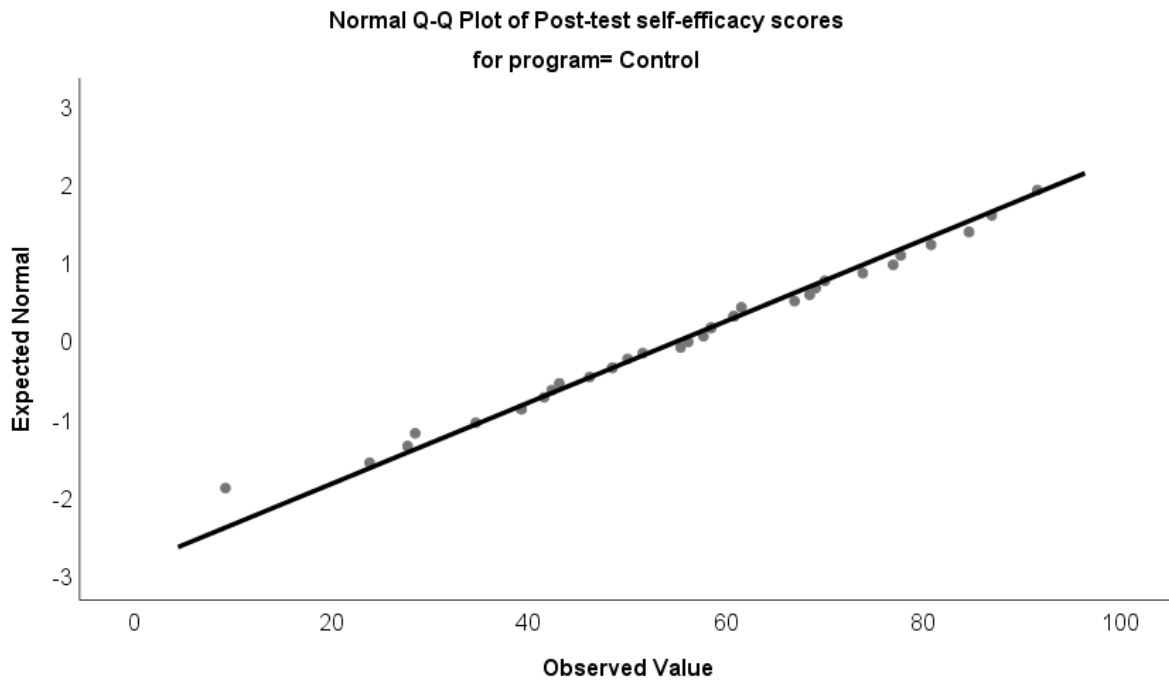
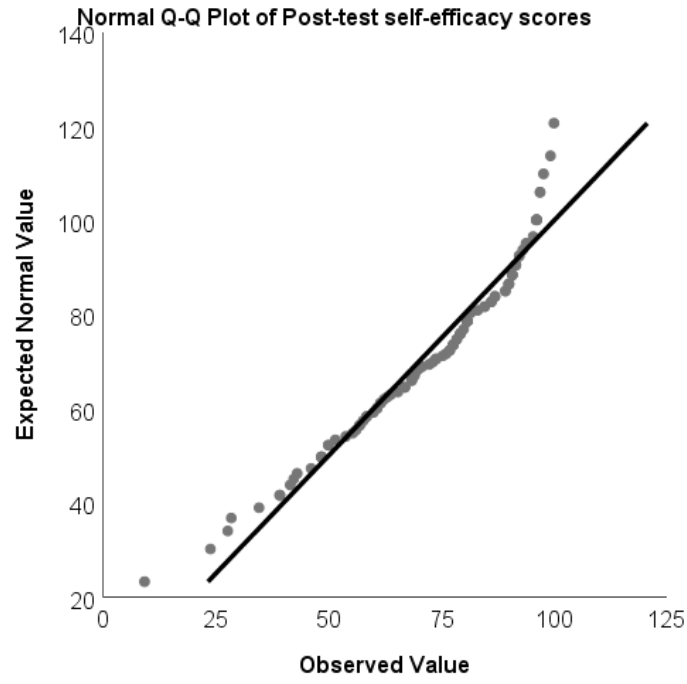
Normal Q-Q Plot of Post-test reading comprehension scores

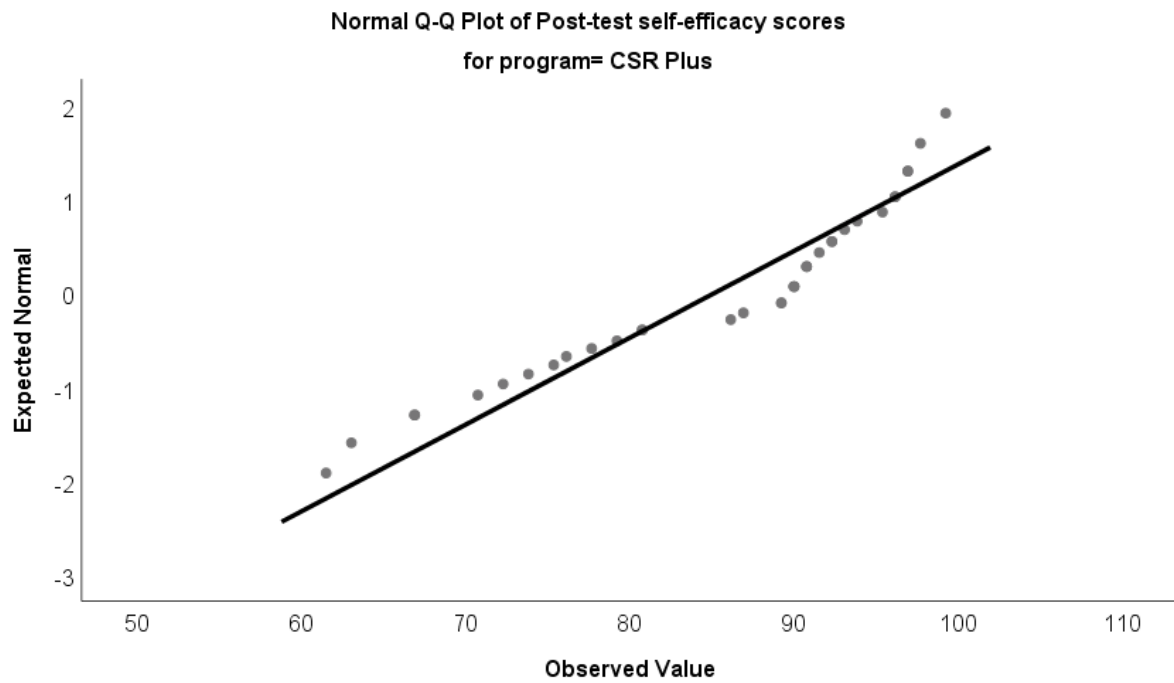
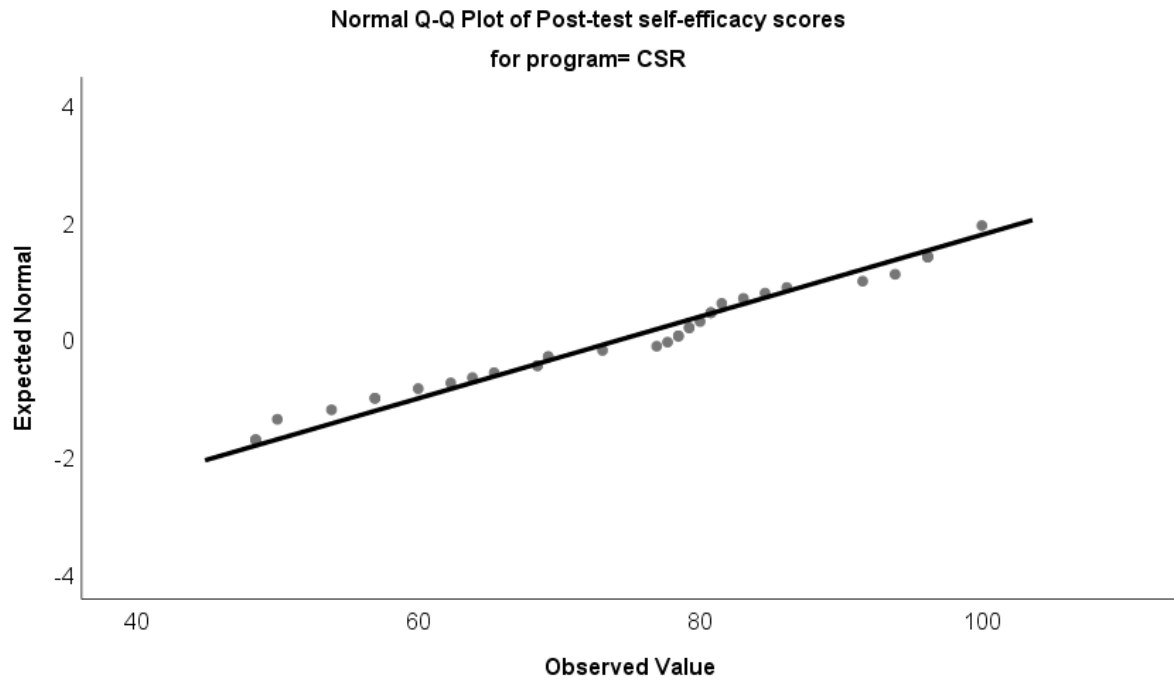
Normal Q-Q Plot of Post test reading comprehension scores
for program= Control











Appendix M. Coding for Students' Learning Logs (Evaluation of the CSR Strategies, Future Plans, and Perceptions of the Effectiveness of the CSR Strategies)

Students' evaluation of the CSR strategies	Definition
Brainstorming was easy/difficult to follow	Students found it easy/difficult to activate their prior knowledge about the topic
Predicting was easy/difficult to follow	Students found it easy/difficult to make predictions about what would appear in the text
Click and clunk was easy/difficult to follow	Students found it easy/difficult to identify the parts of the texts which were easy or difficult to understand
Get the gist was easy/difficult to follow	Students found it easy/difficult to state the main idea of each paragraph
After reading strategies (generating questions and writing a summary) were easy/difficult to follow	Students found it easy/difficult to make questions about the main ideas discussed in the text, and to restate the important ideas learned in the passage
Future plans to improve the use of the CSR strategies	Definition
Practice	Use the CSR strategies more and more in similar activities either alone or with a group
Learn new words	Students should learn new words and improve their vocabulary to improve the use of the CSR strategies
Follow the teacher's comments	Students should carefully read and react to the teacher feedback on how and when to use each of the CSR strategies
Do further research on the CSR strategies	In order to improve the use of the CSR strategies, students suggested that they should learn more about this approach
Respect the order of the CSR strategies	Students should follow the exact order of the CSR strategies, starting from before reading, then during, and finally after reading strategies
Brainstorm so many ideas to understand the content of the text	Generate as many ideas as possible before reading the passage to be able to understand it
Allocate much time for brainstorming	Spend much time on understanding the title and the pictures of the text to understand it
Get the gist of each paragraph in the text by generating important questions	Think about what questions could be asked about the main ideas of each paragraph to improve the use of getting the gist strategy

Reading the passage more than once	Reading the text many times to understand its content
Use dictionary to fix up the clunks	Relying on dictionaries only to get the meaning of the difficult words
Rely on the context to fix up the clunks	focusing on the context of the text only to understand the meaning of the difficult words
Perceptions of the effectiveness of the CSR strategies	Definition
Reading comprehension improvement	The CSR strategies helped the participants to improve their reading comprehension performance
Vocabulary learning	The CSR strategies helped them to learn new words

Appendix N. Strategies Used at Pre-test and Post-test across the Control, the CSR, and the CSR

Plus Group

Control group	HRC HSE	HRC LSE	LRC LSE
Pre-test strategy use	Focusing on vocabulary Skim for gist/identify the main idea, theme, or concept/ Scan for explicit information requested in the item Using context	Focusing on vocabulary Asking a colleague Skim for gist/identify the main idea, theme, or concept/ Scan for explicit information requested in the item	Using dictionary Asking a colleague
Post-test strategy use	Focusing on vocabulary Using context	Focusing on vocabulary Asking a colleague Using context	Using dictionary Asking a colleague
CSR group	HRS HSE	HRC LSE	LRC LSE
Pre-test strategy use	Focusing on Vocabulary Skim for gist/identify the main idea, theme, or concept/ Scan for explicit information requested in the item Using context	Focusing on Vocabulary Highlighting and marking Using dictionary Skim for gist/identify the main idea, theme, or concept/ Scan for explicit information requested in the item Using context	Highlighting and marking Using dictionary Asking a colleague

Post-test strategy use	*Brainstorming by answering the pre-reading questions Using context Break the text into smaller parts *Click and clunk * Get the gist * Generate questions *Write a summary * Use local context cues to interpret a word or phrase * Break lexical items into parts * Reread the sentence without the clunk	*Brainstorming by answering the pre-reading questions Using context Break the text into smaller parts *Click and clunk * Get the gist * Generate questions *Write a summary * Use local context cues to interpret a word or phrase * Break lexical items into parts *Reread the sentence without the clunk	*Brainstorming and predicting using pictures, headings, and bolded words *Click and clunk * Get the gist * Generate questions *Write a summary * Use local context cues to interpret a word or phrase * Break lexical items into parts *Reread the sentence without the clunk
CSR Plus group	HRC HSE	HRC LSE	LRC LSE
Pre-test strategy use	Focusing on Vocabulary Using context Translating /	Focusing on Vocabulary Asking a colleague Translating	Using dictionary Asking a colleague
Post-test strategy use	*Brainstorming by answering the pre-reading questions Using context Break the text into smaller parts *Click and clunk * Get the gist * Generate questions *Write a summary * Use local context cues to interpret a word or phrase * Break lexical items into parts *Reread the sentence without the clunk	*Brainstorming using pictures Using context Break the text into smaller parts *Click and clunk * Get the gist * Generate questions *Write a summary * Use local context cues to interpret a word or phrase * Break lexical items into parts * Reread the sentence without the clunk	*Brainstorming and predicting using pictures, headings, and bolded words Using context *Click and clunk * Get the gist * Generate questions *Write a summary * Use local context cues to interpret a word or phrase * Break lexical items into parts *Reread the sentence without the clunk

*Strategies taught in the intervention

Appendix O. Ethical Approval

University of Reading
Institute of Education
Ethical Approval Form A (version May 2015)



Tick one:

Staff project: PhD EdD

Name of applicant (s): Nezha Badi

Title of project: Investigating Reading Comprehension Proficiency and Self-Efficacy among Algerian EFL Students.

Name of supervisor (for student projects): Professor Suzanne Graham; Dr Louise Courtney

Please complete the form below including relevant sections overleaf.

	YES	NO
Have you prepared an Information Sheet for participants and/or their parents/carers that:		
a) explains the purpose(s) of the project	✓	
b) explains how they have been selected as potential participants	✓	
c) gives a full, fair and clear account of what will be asked of them and how the information that they provide will be used	✓	
d) makes clear that participation in the project is voluntary	✓	
e) explains the arrangements to allow participants to withdraw at any stage if they wish	✓	
f) explains the arrangements to ensure the confidentiality of any material collected during the project, including secure arrangements for its storage, retention and disposal	✓	
g) explains the arrangements for publishing the research results and, if confidentiality might be affected, for obtaining written consent for this	✓	
h) explains the arrangements for providing participants with the research results if they wish to have them	✓	
i) gives the name and designation of the member of staff with responsibility for the project together with contact details, including email . If any of the project investigators are students at the IoE, then this information must be included and their name provided	✓	
k) explains, where applicable, the arrangements for expenses and other payments to be made to the participants	n/a	
j) includes a standard statement indicating the process of ethical review at the University undergone by the project, as follows: "This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct".	✓	
k) includes a standard statement regarding insurance: "The University has the appropriate insurances in place. Full details are available on request"	✓	
Please answer the following questions		
1) Will you provide participants involved in your research with all the information necessary to ensure that they are fully informed and not in any way deceived or misled as to the purpose(s) and nature of the research? (Please use the subheadings used in the example information sheets on blackboard to ensure this).	✓	
2) Will you seek written or other formal consent from all participants, if they are able to provide it, in addition to (1)?	✓	
3) Is there any risk that participants may experience physical or psychological distress in taking part in your research?		✓
4) Have you taken the online training modules in data protection and information security (which can be found here: http://www.reading.ac.uk/internal/imps/Staffpages/imps-training.aspx)?	✓	
5) Have you read the Health and Safety booklet (available on Blackboard) and completed a Risk Assessment Form to be included with this ethics application?	✓	
6) Does your research comply with the University's Code of Good Practice in Research?	✓	
	YES	NO
7) If your research is taking place in a school, have you prepared an information sheet and consent form to gain the permission in writing of the head teacher or other relevant supervisory professional?	✓	
8) Has the data collector obtained satisfactory DBS clearance?		✓
9) If your research involves working with children under the age of 16 (or those whose special educational needs mean they are unable to give informed consent), have you prepared an information sheet and consent form for parents/carers to seek permission in writing, or to give parents/carers the opportunity to decline consent?		✓

10) If your research involves processing sensitive personal data ¹ , or if it involves audio/video recordings, have you obtained the explicit consent of participants/parents?			✓
11) If you are using a data processor to subcontract any part of your research, have you got a written contract with that contractor which (a) specifies that the contractor is required to act only on your instructions, and (b) provides for appropriate technical and organisational security measures to protect the data?			✓
12a) Does your research involve data collection outside the UK?	✓		
12b) If the answer to question 12a is "yes", does your research comply with the legal and ethical requirements for doing research in that country?	✓		
13a) Does your research involve collecting data in a language other than English?		✓	
13b) If the answer to question 13a is "yes", please confirm that information sheets, consent forms, and research instruments, where appropriate, have been directly translated from the English versions submitted with this application.			
14a. Does the proposed research involve children under the age of 5?		✓	
14b. If the answer to question 14a is "yes": My Head of School (or authorised Head of Department) has given details of the proposed research to the University's insurance officer, and the research will not proceed until I have confirmation that insurance cover is in place.			✓
If you have answered YES to Question 3, please complete Section B below			

Please complete **either** Section A or Section B and provide the details required in support of your application. Sign the form (Section C) then submit it with all relevant attachments (e.g. information sheets, consent forms, tests, questionnaires, interview schedules) to the Institute's Ethics Committee for consideration. Any missing information will result in the form being returned to you.

A: My research goes beyond the 'accepted custom and practice of teaching' but I consider that this project has no significant ethical implications. (Please tick the box.)	✓
Please state the total number of participants that will be involved in the project and give a breakdown of how many there are in each category e.g. teachers, parents, pupils etc.	
Main study: 105 students	
Pilot study numbers: 30 students	
Give a brief description of the aims and the methods (participants, instruments and procedures) of the project in up to 200 words noting:	
<ol style="list-style-type: none"> 1. title of project 2. purpose of project and its academic rationale 3. brief description of methods and measurements 4. participants: recruitment methods, number, age, gender, exclusion/inclusion criteria 5. consent and participant information arrangements, debriefing (attach forms where necessary) 6. a clear and concise statement of the ethical considerations raised by the project and how you intend to deal with them. 7. estimated start date and duration of project 	
Investigating Reading Comprehension Proficiency and Self-Efficacy among Algerian EFL Students	
<p>This research study seeks to examine the impact of an intervention on EFL Algerian university students' reading comprehension and self-efficacy in English. One hundred and five (105) EFL students in Mohammed Lamine Debaghine University (Setif 2) will be chosen as a sample and will be randomly assigned to a control and one of the two experimental groups. The study has a pre-post-test design with an intervention.</p> <p>Prior to the intervention phase, all participants will complete a reading comprehension test adopted from 'Tests of English as a Foreign Language' (TOEFL). The subjects will be then asked to complete an English reading questionnaire immediately after the reading comprehension test. The questionnaire aims to examine their reading self-efficacy beliefs and attributions for their outcomes in reading comprehension activities. Twelve (12) participants will also be interviewed and audio recorded. In the intervention, students in one experimental group will receive training sessions by the researcher in reading strategies. Participants in the other experimental group will receive the same training in reading strategies but in addition will receive strategy-focused feedback. The training programme with both groups will last for a period of 12 weeks. Students' interaction and communication in the training sessions will be observed by the researcher.</p>	

¹ Sensitive personal data consists of information relating to the racial or ethnic origin of a data subject, their political opinions, religious beliefs, trade union membership, sexual life, physical or mental health or condition, or criminal offences or record.

They will be also asked to keep learning logs to track their learning process during the treatment classes. The control group will also be taught by the researcher, however, they will receive normal reading instruction, based on answering comprehension questions.

Finally, during the post-intervention phase, a questionnaire and a reading comprehension test will be administered to all participants as at pre-test. A second interview will be conducted with the same 12 students as in the pre-intervention phase. To evaluate the efficacy of the intervention, students in the experimental groups only will be asked to complete an additional questionnaire, namely the " Questionnaire on Students' Perceptions towards the CSR" (Experimental Group 1) and "Questionnaire on Students' Perceptions towards the CSR and Feedback Instruction" (Experimental Group 2) (please see pages 1-6 of attached Research Instruments file).

B: I consider that this project may have ethical implications that should be brought before the Institute's Ethics Committee.

Please state the total number of participants that will be involved in the project and give a breakdown of how many there are in each category e.g. teachers, parents, pupils etc.

Give a brief description of the aims and the methods (participants, instruments and procedures) of the project in up to 200 words.

1. title of project
2. purpose of project and its academic rationale
3. brief description of methods and measurements
4. participants: recruitment methods, number, age, gender, exclusion/inclusion criteria
5. consent and participant information arrangements, debriefing (attach forms where necessary)
6. a clear and concise statement of the ethical considerations raised by the project and how you intend to deal with them.
7. estimated start date and duration of project

C: SIGNATURE OF APPLICANT:

Note: a signature is required. Typed names are not acceptable.

I have declared all relevant information regarding my proposed project and confirm that ethical good practice will be followed within the project.

Signed: [Redacted] Print Name: Nezha Badi Date: 28/07/2017.

STATEMENT OF ETHICAL APPROVAL FOR PROPOSALS SUBMITTED TO THE INSTITUTE ETHICS COMMITTEE

This project has been considered using agreed Institute procedures and is now approved.

Signed: [Redacted] Print Name: Jill Porter Date: 9/8/17
 (IoE Research Ethics Committee representative) *

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Appendix P. Information Sheet and Consent Form for the Head of Department



Principal Researcher: Nezha Badi
Phone: [REDACTED] or
 [REDACTED] (Algeria)
Email: N.Badi@pgr.reading.ac.uk

Participant information sheet for Head of the Department

Research Project: Investigating Reading Comprehension Proficiency and Self-Efficacy among Algerian EFL Students.

Project Team Members: Miss Nezha Badi (PhD student)
 Professor Suzanne Graham; Dr. Louise Courtney (supervisors)

Dear Head of the English Language Department at Mohammed Lamine Debaghine University (Setif 2)

We would like to invite you to take part in a research study on reading comprehension in English, which is being completed as part of Miss Badi's PhD.

What is the study?

The aims of this research study are twofold: 1) to investigate what impact there is from a particular method of teaching reading comprehension called collaborative strategic reading (CSR) for students' reading comprehension outcomes and perceived confidence in reading. 2) To evaluate students' perceptions of effectiveness of the training program. We then hope to make recommendations about enhancing students' reading comprehension and confidence in reading in English in Algerian Universities.

[To add for Pilot Study: At this stage, we are trialling the materials to be used in the Main Study]

Why has your department been chosen to take part?

Your department has been invited to take part because the main focus of this research project is addressing Algerian EFL university students' reading in English. Miss Badi is a former EFL student in this department two years ago, giving her knowledge of the context, which will facilitate her work with current students in your department.

Do I have to take part?

It is entirely up to you whether you participate. You may also withdraw your consent to participation at any time during the project, without any repercussions to you, by contacting Miss Nezha Badi, Tel: [REDACTED] (UK) or 0 [REDACTED] (Algeria), email: N.Badi@pgr.reading.ac.uk

What will happen if I take part?

If you consent to your department taking part in the study, all second-year students will be invited to participate. First, they will be asked to complete a language proficiency test in English, completed in class, and taking 45 minutes. After that, approximately 105 students will be randomly assigned to either a control group, or one of the two experimental groups. The chosen sample will complete an English reading comprehension test which takes about one hour, in class. Then, they will complete a questionnaire consisting of 17 questions, taking approximately 15 minutes of class time, asking about their levels of confidence in reading comprehension activities in English. After that, approximately 12 participants will be randomly chosen and asked to take part in an interview to further explore their experience in dealing with reading comprehension tasks. The interview will take about 30 minutes with each individual student and will be held at a convenient time and place for them. The researcher will ask the interviewees for their consent to audio record the conversation.

Different teaching methods will be implemented with the groups of students during the intervention. All the teaching classes will be taken by Miss Badi in order to maintain instructional consistency among the participants. Students' interaction in class will be observed. They will be also asked to keep logs to track their learning during the instruction period.

Finally, at the end of the training programme students will again complete, during class time, the questionnaire, interview, and reading test, plus an additional questionnaire asking for their views about the teaching they have received for reading.

[Pilot study: If you consent to your department taking part in the study, approximately 30 volunteers will be sought from second year students. First, students will be asked to complete a language proficiency test in English, completed in class, and taking 45 minutes. After that, they will complete an English reading comprehension test which takes about one hour, in class. Then, they will complete a questionnaire consisting of 17 questions, taking approximately 15 minutes of class time, asking about their levels of confidence in reading comprehension activities in English. After that, approximately two participants will be asked to take part in an interview to further explore their experience in dealing with reading comprehension tasks. The interview will take about 30 minutes with each individual student and will be held in a convenient setting. These will be audio recorded with students' consent. In the next phase, students will be required to work on reading comprehension tasks in small group of five members. Over a period of one week, students will receive instruction on reading comprehension strategies, and an additional feedback treatment from the researcher on their reading comprehension performance and strategy use. Finally, at the end of the instruction, students will again complete, during class time, the questionnaire, interview, and reading test, plus an additional questionnaire asking for their views about the teaching they have received.]

What are the risks and benefits of taking part?

The information provided by the participants will remain confidential and will only be seen by the research team listed at the start of this letter. Information about individual participants will not be shared with anyone in the university.

It is useful for participants to take part in this study for many reasons. We anticipate that students will find it interesting and helpful for their reading in English to take part in the study. Findings of the study will be

useful also for teachers in planning how they teach reading comprehension for EFL learners in the Algerian classrooms.

What will happen to the data?

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. No identifiers linking you, the university, or students the study will be included in any sort of report that might be published. Participants will be assigned numbers and pseudonyms and will be referred to by that numbers and names in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the research team will have access to the records. In line with the University's policy on the management of research data, anonymised data gathered in this research may be preserved and made publicly available for others to consult and re-use. The results of the study will be presented at national and international conferences, and in written reports and articles. We can send you electronic copies of these publications if you wish.

What happens if I change my mind?

You can change your mind at any time without any repercussions. During the research, you can stop completing the activities at any time. If you change your mind after data collection has ended, we will discard your data.

Who has reviewed the study?

This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University has the appropriate insurances in place. Full details are available on request.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you can contact Professor Suzanne Graham, University of Reading; Tel: [REDACTED], email: s.j.graham@reading.ac.uk

Where can I get more information?

If you would like more information, please contact Nezha Badi
Tel: [REDACTED] (UK), [REDACTED] (Algeria), email: N.Badi@pgr.reading.ac.uk

We do hope that you will agree to your participation in the study. If you do, please complete the attached consent form and return it to us.

Thank you for your time.

Head of the Department Consent Form

I have read the Information Sheet about the project and received a copy of it.

I understand what the purpose of the project is and what is required of me. All my questions have been answered.

Name of Head of the Department _____

Please tick as appropriate:

I consent taking part in the project as it has been explained in the information sheet

Signed: _____

Date: _____

Appendix Q. Information Sheet and Consent Form for Students



Principal Researcher: Nezha Badi

Phone: [REDACTED] or

[REDACTED] (Algeria)

Email: N.Badi@pgr.reading.ac.uk

Participant information sheet for Students

Research Project: Investigating Reading Comprehension Proficiency and Self-Efficacy among Algerian EFL Students.

Project Team Members: Miss Nezha Badi (PhD student)
Professor Suzanne Graham; Dr. Louise Courtney (supervisors)

We would like to invite you to take part in a research study on reading comprehension in English.

What is the study?

This research project aims 1) to investigate what might be the best way to teach reading in English. 2) To evaluate students' perceptions of effectiveness of the teaching in reading that they receive. We then hope to make recommendations about enhancing students' reading comprehension and confidence in reading in English.

Why have you been chosen to take part?

You have been invited to take part because the main focus of this research project addresses Algerian EFL university students' reading in English. In addition, I am particularly interested in EFL learners who have already developed some proficiency in English. Thus, you as a second year EFL student meet these criteria.

Do I have to take part?

It is entirely up to you whether you participate. You may also withdraw your consent to participation at any time during the project, without any repercussions to you, by contacting the Project Principal Investigator, Miss Nezha Badi, Tel: [REDACTED] (UK) or 0 [REDACTED] (Algeria), email: N.Badi@pgr.reading.ac.uk

What will happen if I take part?

If you agree that you will take part in the study, you will be first asked to complete a language proficiency test in English before the start of the main study. After that, approximately 105 students from the whole cohort will be randomly assigned to one of three teaching groups. The chosen sample will complete in class an English reading comprehension test which takes about one hour. Then, you will complete a questionnaire consisting of 17 questions on how confident you feel about your abilities in reading comprehension activities in English, which will take about 15 minutes. After that, approximately 12 participants will be randomly chosen and asked to take part in an interview to further explore their experience in dealing with reading comprehension tasks. The interview will take about 30 minutes with

each individual student and will be held at a convenient time and place for them. The researcher will ask the interviewees for their consent to audio record the conversation.

Each teaching group will be taken by Miss Badi in order to maintain instructional consistency among the participants. Students' interaction in class will be observed. Students will be also asked to keep logs to track their learning during the instruction period.

Finally, at the end of the training programme students will again complete, during class time, the questionnaire, interview, and reading test, plus an additional questionnaire asking for their views about the teaching they have received for reading.

[Pilot study: If you consent to taking part in the study, you will be asked to complete a language proficiency test in English, completed in class, and taking 45 minutes. After that, you will complete an English reading comprehension test which takes about one hour, in class. Then, you will complete a questionnaire consisting of 17 questions, taking approximately 15 minutes of class time, asking about your levels of confidence in reading comprehension activities in English. After that, approximately two participants will be asked to take part in an interview to further explore their experience in dealing with reading comprehension tasks. The interview will take about 30 minutes with each individual student and will be held in a convenient setting and at a convenient time.]

What are the risks and benefits of taking part?

The information provided by you will remain confidential and will only be seen by the research team listed at the start of this letter. Information about individual participants will not be shared with anyone in the university. Choosing to participate or not to participate in the study will not influence your grades.

It is useful for participants to take part in this study for many reasons. We anticipate that students will find it interesting and helpful for their reading in English to take part in the study. Findings of the study will be useful also for teachers in planning how they teach reading comprehension for EFL learners in the Algerian classrooms.

What will happen to the data?

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. No identifiers linking you, the university, or students the study will be included in any sort of report that might be published. Participants will be assigned numbers and pseudonyms and will be referred to by that numbers and names in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the research team will have access to the records. In line with the University's policy on the management of research data, anonymised data gathered in this research may be preserved and made publicly available for others to consult and re-use. The results of the study will be presented at national and international conferences, and in written reports and articles. We can send you electronic copies of these publications if you wish.

What happens if I change my mind?

You can change your mind at any time without any repercussions. During the research, you can stop completing the activities at any time. If you change your mind after data collection has ended, we will discard your data.

Who has reviewed the study?

This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University has the appropriate insurances in place. Full details are available on request.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you can contact Professor Suzanne Graham, University of Reading; Tel: [REDACTED], email: s.j.graham@reading.ac.uk

Where can I get more information?

If you would like more information, please contact Nezha Badi
Tel: [REDACTED] (UK), [REDACTED] (Algeria), email: N.Badi@pgr.reading.ac.uk

We do hope that you will agree to your participation in the study. If you do, please complete the attached consent form and return it to us.

Thank you for your time.

Participant Consent Form

I have read the Information Sheet about the project and received a copy of it.

I understand what the purpose of the project is and what is required of me. All my questions have been answered.

Name of participant: _____

Please tick as appropriate:

- | | |
|--|--------------------------|
| I consent to complete questionnaires before and after the training programme | <input type="checkbox"/> |
| I consent to take reading comprehension activities | <input type="checkbox"/> |
| I consent to attend reading comprehension sessions while being observed | <input type="checkbox"/> |
| I consent to keep a record of my learning during the training sessions | <input type="checkbox"/> |
| I consent to participate in the interviews while being audio recorded | <input type="checkbox"/> |

Signed: _____

Date: _____