



**Incorporating Cognitive Strategy Instruction Models  
and Action Research into Professional Development to  
Enhance EFL Reading and Writing Instruction**

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**ABSTRACT**

This study aimed at investigating the effectiveness of training 13 EFL in-service teachers on incorporating action research with cognitive strategy instruction models to improve teaching EFL reading and writing instruction. The training focused on using two instructional models; the Collaborative Strategic Reading (CSR) for reading and the Self-Regulated Strategies Development (SRSD) for writing. A mixed methods research design was adopted for this study to allow triangulation of data and explore the multi-dimensional nature of the study variables. The participant teachers were engaged in conducting action research utilizing the cognitive strategy instruction. The teachers' action research reports and the school students' gains in writing and reading were analyzed and interpreted. Results demonstrated that the training was effective in developing teachers' skills of developing and conducting action research and implementing CSI in their classroom practices. Results revealed that teachers prefer using SRSD over CSR. Additionally, students who were taught using SRSD achieved more learning gains rather than the students who were taught using CSR.

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**Keywords:** Cognitive Strategy Instruction, Collaborative Strategic Reading, Self-Regulated Strategy Development, In-Service Professional Development, Action Research, EFL Reading Instruction, EFL Writing Instruction

## INTRODUCTION

The current drive to promote teacher quality has placed increased emphasis on the value of providing high-quality professional development opportunities that deepen teachers' professional knowledge by immersing them in real experience and allowing them to process this knowledge by putting it into practice to bring about improvements in their classroom practices. However, professional development programs, as stated by Gore et al. (2017), often lack direct links with classroom practice. Few professional development endeavors and initiatives directly link specific teacher development activities to changes in teaching practice and improved student outcomes.

Action research (AR) is one of the engines that drives renewal in schools. AR is a professional development tool that affords teachers opportunities for continuous growth based on reflective and active practice (Pentón Herrera, 2018). Therefore, action research is considered an integral form of professional learning for teachers as it allows teachers to transform and internalize the new knowledge they acquire in professional development training into a routinized appropriate classroom teaching practice and make their work more professional (Kizilaslan, & Leutwyler, 2012).

The major aims of professional development (PD) are to keep teachers abreast of current issues in education, refine their knowledge, shift their perceptions and beliefs, help them implement innovative methods, enhance their practice, and improve their students' learning. Though developing English language learners' abilities to read and write represents a crucial mission for teachers of English, there are few studies regarding professional development in teaching reading and writing (e.g. Klapwijk, 2012; Marculitis, 2017; Sailors, & Price, 2010; Sakolrak, 2014; Scanlon, Gelzheiser, Vellutino, Schatschneider, & Sweeney, 2008; Twomey, 2010; Young, 2015). Olson and Land (2007) affirm that teachers need to learn how to engage students in higher-level thinking and discussion about texts through direct strategy instruction, modeling of strategy use, and creating opportunities for students to practice and apply these skills through teacher coaching and feedback. Cognitive strategies instruction makes visible for ELLs the strategies used by mature readers and writers during the process of meaning construction.

Given the importance of cognitive strategy instruction for student learning, the current researcher developed an in-service training program concerned with teaching reading and writing in EFL classrooms. The program was conceived as part of the course of "Teaching Strategies 1" for a professional diploma in curriculum and methods of teaching provided by the Faculty of Education at Port Said University. This study reports on the results of a study in Faculty of

Education, Port Said University that tested professional development based on two models of Cognitive Strategy Instruction (CSI) for EFL teachers as a way of improving their practices and increasing the reading comprehension and writing performance of their students. The study focused on two models of cognitive strategy instruction which are collaborative strategic reading (CSR) and self-regulated strategies development (SRSD). The first model was implemented by six teachers of different grades (6th, 7th, 8th, and 10th). The second model was implemented by seven teachers of different grades (5th, 6th, 7th, and 8th). Teachers were provided training in incorporating CSR and SRSD with action research during a full academic semester. The training was the same for teachers who implemented the CSR and those who implemented SRSD. Following the training, the teachers developed lesson plans, tests and implemented the selected models via action research at their classes to examine its effect on students' performance.

### **Background of the problem**

English language learners may become expert readers and writers if they are explicitly taught effective strategies and trained to check and monitor their performance while reading and writing. However, in the Egyptian context, there were some problems worth noticing on reading comprehension and writing instruction. Teaching English in the primary stage focuses mainly on teaching elements of the language (vocabulary, grammar, and sounds) rather than skills of the English language (listening, reading, writing, and speaking). Besides, reading instruction in older stages focuses on skimming and scanning. Additionally, despite the fact that writing is the most emphasized skill in English education in Egypt, as students in different exams are required to show their command over English through writing, it is the least developed skill among students and deemphasized in the curriculum design and delivery. Writing is viewed mainly as developing grammatical and structural accuracy and thus students do not receive direct instruction on ideas development and ideas organization or on managing and evaluating their own writing.

In order to accomplish quality education, there is a need for well-established professional development training for in-service teachers to enhance teachers' competence in providing effective reading comprehension and writing instruction. Selecting and implementing high-quality instructional materials and models that lead to improving teachers' instructional skills of reading and writing and students' growth is a concern of many studies (e.g. Marculitis, 2017; Islam, 2017). Schmidt's study (2017) assured the positive impact of a small group differentiated instruction literacy professional development on student reading achievement and self-efficacy

beliefs of participating teachers in K through second grade. Likely, Harris et al. (2012) found that the practice-based professional development using the SRSD instructional model resulted in significant growth in elementary students writing products for story and opinion essay writing.

Effective professional development, Darling-Hammond, Hyler, and Gardner (2017) assured, is a kind of structured professional learning that results in improvements in teacher practices and student learning outcomes. However, it is important to note that PD studies focused mainly on developing teachers' knowledge and dispositions and few studies have attempted to examine the impact of PD on students' learning (Gersten, Dimino, Jayanthi, Kim and Santoro, 2010). Besides, most of the professional development activities fail or have little effect as they are usually short courses or workshops with no or poor connection to real classroom practice (Guskey, 2002). For instance, Garet et al. (2008) conducted a large-scale early reading PD utilizing two interventions (i.e. content-focused seminar series and in-school coaching) in high-poverty schools. The results revealed that though there were positive impacts on teacher's knowledge of scientifically based reading instruction and on one of the three instructional practices targeted by PD, neither PD intervention resulted in significantly higher student test scores at the end of the one-year treatment.

Thus, Wei, Darling-Hammond, and Adamson (2010) assured that successful professional development that results in increases in student learning should be sustained and provide teachers with opportunities for connecting academic content to practice. For instance, Scanlon, Gelzheiser, Vellutino, Schatschneider and Sweeney (2008) proved that the three conditions of professional development: professional development for classroom teachers only, supplemental small group intervention only, or the two treatments combined were effective in reducing early reading difficulties incidence among at-risk kindergarten students. In the Egyptian context, Mostafa (2007) found that a school-based professional development program, using the lesson study model had significant effects on developing in-service teachers' teaching performances in planning, instruction, management, and assessment.

Based upon the aforementioned review, it can be concluded that teacher professional development should not be of the one-shot workshop kind. It must provide in-service teachers with opportunities for extended learning that is embedded in the class routines and instructional practices. Involving teachers in action research to transform the theoretical knowledge they get in workshops into practical behaviors inside their classroom is the essence of effective and sustained professional development. Thus, the current study was conducted in response to the

need for research on the contribution of PD to teachers' instruction and students' reading and writing achievement.

Evidence of the problem was identified through a review of research about teachers professional development in Egypt shows that there is a robust body of research to demonstrate the value of professional development, especially action research, for EFL in-service teachers' professional growth and promoting their students' learning. In addition, El-Bilawi and Nasser (2017) examined EFL teachers' perspectives on the professional development (PD) provided by the Egyptian Ministry of Education as part of a national reform plan before the political changes in Egypt. The results highlighted teachers' dissatisfaction with the lack of support and follow up from the administration, in addition to the lack of practical examples that characterized the PD. Likely, Sholah, Qoura and Dadour's pilot study (2016) assured English teachers' discontent with professional training as it was limited to workshops that did not consider their training needs in addition that they were not provided with opportunities to apply the training content within their classes during the training programs. Considering the teachers' training needs, Zuheer's study (2013) revealed the positive effects of a training program based on the needs EFL teachers at Sana'a secondary schools on developing their skills of effective communication skills, reflection, integrating language skills and intercultural competence.

The current study was also motivated by the participating EFL teachers' desire for deep professional development training especially for teaching students who struggle with English reading and writing. The participating teachers generally have none or little preparation for dealing with students with learning difficulties as the Egyptian teacher education programs did not include any courses related to special education before 2005. They expressed their need to develop themselves as teachers and learn about new trends in teaching English as an essential reason for enrolling in a professional diploma specialized in curriculum and methods of teaching (EFL). Besides, though there is a vigorous body of research that values explicit cognitive strategy instruction, there is a paucity of research on incorporating it into teachers' professional development and examining its effect on enhancing the quality of reading and writing instruction in schools, especially in the EFL context.

Accordingly, this study is designed to examine the effectiveness of incorporating cognitive strategy instruction models and action research into professional development to enhance EFL reading and writing instruction, through investigating the following questions:

1. How far does action research affect EFL in-service teachers?

2. How far do EFL in-service teachers incorporate CSI into their reading instruction?
3. How far do EFL in-service teachers incorporate CSI into their writing instruction?
4. How far does incorporating CSI and AR into PD have effects on reading outcomes of the students whose teachers participated in the PD training?
5. How far does incorporating CSI and AR into PD have effects on writing outcomes of the students whose teachers participated in the PD training?

### **Purpose of the study**

**The purpose of the study was threefold:**

1. Examining the effect of incorporating cognitive strategy instruction in EFL in-service teachers' professional development utilizing action research on reading instruction.
2. Examining the effect of incorporating cognitive strategy instruction in EFL in-service teachers' professional development utilizing action research on writing instruction.
3. Investigating the effects of action research on EFL in-service teachers.

### **Significance of the study**

The significance of the study stems from the following considerations:

1. Introducing cognitive strategy instructional models that can be used for teaching reading and writing.
2. Directing the attention to the implications of CSI for EFL teacher professional development.
3. Adding value to the scholarly literature of AR for EFL teacher professional development.

## **REVIEW OF LITERATURE**

### **Professional development and action research:**

A key factor in promoting students' achievement is to encourage teachers to participate in effective transformative PD. Guskey (2000, p.16) defines PD as the processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators to improve the learning of students. According to Garcés and Granada (2016, p. 40), PD is an ongoing process in which teachers engage to transform some of their conceptions and practices around pedagogy, methodology, and didactics in order to find new roads that allow them to meet the needs and interests of their own contexts.

English language teachers are in need of effective professional development to keep pace with the rapidly changing and developing educational setting

(Hismanoglu, 2010). Effective professional development initiatives should engage teachers in self-reflection and evaluation, develop specialized knowledge and skills, expand their knowledge about research, theory, and issues in teaching, foster collaborative relationships with other teachers, and allow teachers take on new roles such as supervisor or mentor teacher, teacher-researcher, or materials writer (Richards, & Farrell, 2005).

Guskey (2000, pp. 22-28) reviewed seven core professional development practices and identified advantages and shortcomings for each model. An abbreviated version is provided below in table 1.

*Table 1. Models of Professional Development*

<b>Models</b>	<b>Advantages</b>	<b>Shortcomings</b>
<b>Training</b> Presentation with various group-based activities such as discussions, workshops, seminars, demonstrations, role-playing, simulations, and micro-teaching.	<ul style="list-style-type: none"> <li>• efficient for sharing ideas with large groups</li> <li>• provides shared knowledge base and common vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>• few opportunities for choice or individualization</li> <li>• requires additional follow-up activities</li> <li>• not appropriate for varied-levels of skills</li> </ul>
<b>Observation/Assessment</b> Observing performance and receiving feedback using peer coaching and clinical supervision. It is followed by analysis, explanation, and reflection	<ul style="list-style-type: none"> <li>• the observer gains professional expertise.</li> <li>• the observed gains new insights and helpful feedback.</li> <li>• promotes collegiality.</li> </ul>	<ul style="list-style-type: none"> <li>• requires scheduled time.</li> <li>• requires coordination.</li> </ul>
<b>Improvement Processes</b> Developing or reviewing curriculum/program or planning a strategy to implement new instructional strategies or to solve problems	<ul style="list-style-type: none"> <li>• enhances knowledge and skills as well as collaboration</li> <li>• developed solution/strategies are likely to succeed</li> </ul>	<ul style="list-style-type: none"> <li>• limited to a small group</li> <li>• tradition may dominate innovation</li> <li>• requires access to research to guide decisions</li> </ul>
<b>Study Groups</b> All staff members are divided into groups working collaboratively to solve a problem or set a plan.	<ul style="list-style-type: none"> <li>• lessens isolation</li> <li>• reinforces ongoing professional learning</li> <li>• teachers act as learners</li> </ul>	<ul style="list-style-type: none"> <li>• some individuals may dominate the groups.</li> <li>• requires time and effort to review research evidence</li> <li>• discussion may become opinion-based instead of research-based</li> </ul>
<b>Inquiry/Action Research</b> Solving a problem or	<ul style="list-style-type: none"> <li>• enhances reflection,</li> </ul>	<ul style="list-style-type: none"> <li>• requires willingness and commitment</li> </ul>



Models	Advantages	Shortcomings
answering a question following the 5 steps of action research that end with taking action and reflection.	problem-solving, and decision making <ul style="list-style-type: none"> <li>• narrow the gap between research and practice</li> <li>• teachers act as researchers</li> </ul>	
<b>Individually Directed Activities</b> Self-initiated learning that involves selecting activities that achieve personal goals and plans using journal writing, portfolio, video/audio self-assessment	<ul style="list-style-type: none"> <li>• flexible and individualized</li> <li>• reinforces self-assessment and personal reflection</li> </ul>	<ul style="list-style-type: none"> <li>• lessens collegial collaboration.</li> <li>• individual goals may be unworthy</li> </ul>
<b>Mentoring</b> Pairing more and less experienced educators for discussing goals/plans, sharing ideas, reflecting on practices for improvement.	<ul style="list-style-type: none"> <li>• fosters lifelong learning</li> <li>• reinforces professional relationships</li> </ul>	<ul style="list-style-type: none"> <li>• the limited scope of cooperation and sharing</li> </ul>

Given the importance of English teachers' professional development as a leading element in educational reform, educational researchers were motivated to examine various models of PD. Klapwijk (2012) implemented a 15-week reading strategy instruction (RSI) training for three in-service teachers. The training covered a variety of strategies (i.e. activating prior knowledge, prediction, setting goals, questioning, clarifying, and summarizing). Classroom observations of these teachers showed that teachers move through developmental phases in their implementation of RSI. Likely, Twomey's case study (2010) assured the impact of a teacher reading group on Canadian teachers' interest in learning and professional growth. It was found that participating in reading, interpreting, evaluating, and utilizing on-line research promoted professional identity and pedagogical practices. Young (2015) investigated how six elementary school teachers perceived the impact of the Common Core State Standards (CCSS) writing standards on their practice and what kinds of support they needed in order to effectively support writing instruction. Findings indicated the teachers' need for training in writing instruction particularly differentiated writing instruction, the impact of common core standards on the increased rigor of current writing instruction, and a lack of PD at the local school. Similarly, Islam (2017) investigated the effects of 16 weeks

of research-based professional training on 41 elementary pre-service teachers' attitudes toward writing, their perceived competence as writers, and the extent to which these attitudes and perceptions. The training focused on the Common Core Writing Standards and modeling strategies. Findings revealed that pre-service teachers' attitudes about writing were linked to how well prepared they were for applying writing strategies and whether they felt competent to teach writing to elementary students.

Reviewing the literature on teachers' PD indicates that successful PD should be teacher chosen and target promoting teachers' dispositions and skills as well as knowledge utilizing various models. Parise and Spelman (2010) and Vetter (2012), as advocates of informal professional development of teachers (e.g. study groups, committees, mentoring), contend that PD should improve teachers' knowledge about innovative instructional methods and allow teachers to transform that new knowledge into practice to enhance students' learning in their classrooms. Sakolrak's study (2014) provided teachers with a 10-hour school-based training workshop, which focused on instructional design to enhance reading comprehension, followed with mentoring by a university professor mentor focusing on lesson plan writing. Likely, Sailors and Price's study (2010) presented coaching as a viable model of the professional development of reading teachers. They examined two models of professional development (i.e 2-day workshop versus workshop plus classroom-based support from a reading coach) for classroom teachers as a way of improving their practices and increasing the reading achievement of their students. Results demonstrated that the full intervention group (teachers who were coached) outperformed the partial intervention group (workshop only) in all the teacher observation and student achievement measures.

In addition, Marculitis (2017) utilized professional learning communities (PLCs) as a model of teacher professional development for enhancing teachers' writing instruction. This professional development focused on current writing research strategies, like promoting student motivation and constructing self-efficacy in both the student and the teacher. Results revealed that very few of the participating teachers have had actual training on how to teach writing and all of them struggle with writing instruction and giving feedback. In addition, it was found that PLCs engaged teachers more in their own learning and thus changed their instructional practices after the workshop and subsequent professional learning community meetings. Similarly, Gersten, Dimino, Jayanthi, Kim, and Santoro (2010) examined the impact of the Teacher Study Group (TSG) on first-grade teachers' knowledge of reading comprehension and vocabulary instruction and on comprehension and vocabulary achievement of their students. Teachers in the TSG program learned research-based instructional techniques and prepared

lesson plans that considered students' curricular and individual needs. Though results revealed significant improvements in classroom teaching practices, it demonstrated marginally significant effects on students' oral vocabulary and no significant effect on student reading achievement.

Given the potential to improve English teachers' PD, Marculitis (2017) claims that PD workshops that target writing instruction were not enough to satisfy the teachers' professional needs. Furthermore, He highlights that effective PD should allow teachers to practice or revisit new ideas beyond training workshops and accordingly impacts students' development. In line with this claim, O'Connor, Greene and Anderson (2006) assure that conducting Action Research (AR) puts teachers in control of their professional development and provides them with authentic and meaningful opportunities to learn and grow. According to Richards and Farrell (2005), action research refers to teacher-conducted classroom research that seeks to clarify and resolve practical teaching issues and problems through a cycle of activities that include planning, acting, observing, reflecting and creating a revised plan.

Advocating constructivist perspectives in teacher education with the notions of teachers as researchers and reflective practitioners have established a productive framework for adopting action research into English language teacher education (Burns, 2009). Research provides considerable evidence that action research can positively influence teacher practices and lead to increases in student achievement. AR engages teachers as agents of change initiatives in validating educational theories through practice (Sachs, 1999). Action research helps teachers develop a deeper understanding of many issues in teaching and learning as well as acquire useful classroom investigation skills (Richards and Farrell, 2005).

Previous studies of teachers' PD provide considerable evidence that AR contributes to teacher growth and can positively influence teacher practices and lead to increases in student achievement. In fact, Yigit and Bageci (2017) found that primary and middle school teachers perceived action research as a productive professional development experience. Hathorn and Dillon's study (2018) revealed that AR empowered teachers' decision-making skills. Shanks, Miller, and Rosendale (2012) found that engaging pre-service teachers in implementing action research improved their confidence and competence. In the Egyptian EFL context, El-Bassuony (2011) found that a treatment based on collaborative action research and Facebook was effective in developing eighteen EFL pre-service teachers' perceptions of professionalism. Thus, Efron and Ravid (2013) conclude that action research is a powerful strategy for enhancing educators' professionalism and improving the quality of their students' learning, thereby empowering educators to

become active partners in leading school change and powerful agents of educational renewal.

**Cognitive strategy instruction:**

Cognitive strategy instruction (CSI) is an explicit instructional approach that teaches students specific and general cognitive strategies to enhance learning and performance by facilitating and scaffolding information processing. CSI includes metacognitive or self-regulation strategies that help students monitor and evaluate their learning. The theoretical underpinnings of CSI are rooted in cognitive, behavioral, and social development theories of learning. The CSI approach follows a consistent format (see Table 2): Teachers (1) develop and activate background knowledge of students, (2) describe and discuss the strategy, (3) model application of the strategy, (4) have students memorize the strategy, (5) support students' use of the strategy, and (6) move students toward independent use of the strategy. Using proven procedures associated with explicit instruction including process modeling, verbal rehearsal, scaffolded instruction, guided and distributed practice, and self-monitoring, students learn, apply, and internalize a cognitive routine and develop the ability to use it automatically and flexibly (Krawec, Montague, & the DLD/DR, 2012).

*Table 2. Stages of CSI*

<b>Stage of Instruction</b>	<b>Description of Instruction</b>
<b>1) Develop background knowledge</b>	<b>Students are taught any background knowledge needed to use the strategy successfully.</b>
<b>2) Discuss it</b>	<b>The strategy as well as its purpose and benefits are described and discussed.</b>
<b>3) Model it</b>	<b>The teacher models how to use the strategy and introduces the concept of self-instruction.</b>
<b>4) Memorize it</b>	<b>The student memorizes the steps of the strategy.</b>
<b>5) Support it</b>	<b>The teacher supports or scaffolds student mastery of the strategy.</b>
<b>6) Independent use</b>	<b>Students use the strategy with little or no support.</b>

Montague and Dietz (2009, p. 286) state that “the procedural basis of cognitive strategy instruction is explicit instruction, which is characterized by highly structured and organized lessons, appropriate cues and prompts, guided and distributed practice, cognitive modeling, interaction between teachers and students, immediate and corrective feedback on performance, positive reinforcement, overlearning, and mastery”.

Cognitive strategy instruction focuses on teaching students a range of cognitive and metacognitive processes, strategies, or mental activities to facilitate

learning and improve performance. Cognitive strategies appear to meet the learning needs of many students with disabilities (Montague, & Dietz, 2009). Cognitive strategy instruction is based on both behavioral and cognitive theory (i.e., information processing and developmental theory). Cognitive strategy instruction combines instruction in cognitive strategies for handling information (e.g., predicting, visualizing, summarizing), and metacognitive strategies for monitoring and evaluating the understanding of that information (e.g., self-questioning, self-evaluation).

Education initiatives that link teachers' professional development with cognitive strategy instruction offer real possibilities for improving teachers' skills and confidence as well as students' performance. In this vein, Olson and Land (2007), as a part of the California Writing Project, conducted an extended study over an eight-year period that engaged 55 secondary teachers in ongoing professional development implemented a cognitive strategies approach. English language learners in 13 secondary schools who were mostly ESL and LEP learners who received cognitive strategies instruction significantly out-gained peers in the control-group for seven consecutive years in reading and academic writing tests. Findings highlighted the efficacy of implementing a cognitive strategies approach for providing ELL with systematic and explicit instruction in strategies used by experienced readers and writers during the process of meaning construction.

### **Collaborative Strategic Reading:**

Collaborative Strategic Reading (CSR) is a multicomponent research-validated instructional model for improving reading comprehension in inclusive classrooms. Collaborative strategic reading was influenced primarily by studies on reciprocal teaching and by the transactional approach. However, reciprocal teaching and the transactional approach were designed to be used with small teacher-facilitated groups rather than student-led cooperative-learning groups in large classrooms (Klingner, Vaughn, & Schumm, 1998). It was developed by Klingner and Vaughn (1998) and theoretically grounded in cognitive psychology with a focus on explicit instruction for struggling learners. In addition, sociocultural theory informs the structure of CSR with an emphasis on scaffolding and peer-mediated learning. In CSR, students read and discuss text through a combination of teacher-led activities and student-led cooperative group work.

CSR incorporates many features associated with effective instruction, particularly for struggling readers, such as (a) explicit instruction, (b) modeling, (c) guided practice, (d) procedural strategies to facilitate learning, (e) collaborative partner or group work, and (f) opportunities for interactive dialogue among students as well as between teachers and students (Vaughn et al., 2013). According

to Vaughn, Klinger, and Bryant (2001, 67), CSR was designed to address the three educational issues: (a) meeting the learning needs of an increasingly diverse student population, particularly English-language learners and students with learning difficulties; (b) providing an instructional practice that enhances comprehension of text and skills to learn from text and; (c) providing procedures that facilitate peer-mediated instruction.

CSR encompasses four strategies used along three phases (see figure 1): (1) Preview (before reading to activate students' background knowledge and predict what the text might be about); (2) Click and Clunk (during reading to monitor comprehension using fix-up strategies); (3) Get the gist (during reading to restate the most important idea in a paragraph); and (4) Wrap-up (after reading to summarize what has been learned and generate questions) (Boardman et al., 2016).

**Figure 1. Phases and strategies of Collaborative Strategic Reading.**  
(Adapted from Krawec, Montague, & the DLD/DR, 2012, p. 2).

<p><b>Before Reading</b></p> <p><b>1. <u>Preview</u></b></p> <ul style="list-style-type: none"><li>• Guide students in activating background knowledge, making predictions, and identifying the purpose (i.e., discuss the title, section and paragraph headings, illustrations, maps, tables, and so forth).</li><li>• Identify key vocabulary and proper nouns.</li></ul> <p><b>During Reading</b></p> <p><b>2. <u>Click and Clunk</u></b></p> <ul style="list-style-type: none"><li>• (Understanding = click, Need help to understand = clunk)</li><li>• Use fix-up strategies with clunks.<ul style="list-style-type: none"><li>a. Reread the sentence for context clues.</li><li>b. Reread the sentences before and after the “clunk.”</li><li>c. Look at the word structure for root words and affixes.</li></ul></li></ul> <p><b>3. <u>Get the Gist</u></b></p> <ul style="list-style-type: none"><li>• Restate the main idea.</li><li>• Provide supporting details.</li></ul> <p><b>After Reading</b></p> <p><b>4. <u>Wrap-up</u></b></p> <ul style="list-style-type: none"><li>• Formulate questions about the passage.</li><li>• Review main ideas.</li><li>• Write one or two of the most important ideas.</li></ul>
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CSR uses a CSI interactive format to facilitate strategy application as students work in cooperative groups. Each student in the group plays a specific role to guide the group in meaningful discussions during comprehension activities. Vaughn and Edmonds (2006, 133) discussed the roles of the members of the group which include: group leader, clunk expert, gist expert, note-taker/timekeeper and provided a detailed explanation of each role:

1. Group Leader: Group leaders serve as teachers, facilitators, and overall group managers. Just like schools and classrooms, groups with effective group leaders are much more likely to function well. Specifically, group leaders do the following:
  - a) Guide students through previewing
  - b) Assist students with the wrap-up strategy
  - c) Remind students to stay on task and ensure that students are engaged in learning
  - d) Either designate a reader or lead the group in reading aloud
  - e) Designate the sections of passages that will be used for “clunking” and “gisting”
2. Clunk Expert: The clunk expert is the student in the group who checks to be sure students have written their clunks and then works with students to resolve clunks. The clunk expert
  - a) Is familiar with clunk-solving practices
  - b) Makes sure clunks and their resolutions are entered into the learning log
  - c) Checks to be sure all students know and understand clunks
3. Gist Expert: The gist expert is the student in the group who is most familiar with how to effectively construct the main idea of a passage and assists students in composing and writing a gist. The gist expert
  - a) Helps students decide the key idea in a gist
  - b) Helps students use only the most important facts related to the gist
  - c) Assures that the gist for the section has been written down
4. Note-Taker/Timekeeper: The note-taker/timekeeper ensures that the learning logs are completed by the group or individuals (depending upon assignment) and that the material to be read is completed within the time allocated. The note taker/ timekeeper
  - a) Has materials for taking notes, including learning log and pencil
  - b) Considers the amount of time available and the text that has to be read and keeps the group moving at a fast and efficient pace.

The importance of collaborative strategic reading has been well documented, as it has improved the reading comprehension of students with learning difficulties (e.g. Boardman et al., 2016; Vaughn et al., 2011). Moreover, Kim, et al. (2006) developed a computer program integrating collaborative strategic reading with computer-assisted instruction. Results revealed that Computer-Assisted Collaborative Strategic Reading (CACSR) improved reading comprehension of middle school students with disabilities. Additional support for the use of CSR in

developing reading comprehension within diverse subjects (e.g. Social Studies and Science classrooms) was reported in studies conducted by Klingner, Vaughn, and Schumm (1998) and Boardman, Klingner, Buckley, Annamma, and Lasser (2015).

Given the positive outcome of instructing EFL students using CSR, Mendieta, et al. (2015) assured that the use of CSR positively impacted the reading performance, learning attitudes and habits of EFL Colombian participants with overall low performance in reading comprehension activities. Results revealed that participants developed effective reading comprehension skills, learned to participate in a collaborative reading environment, responded positively to the development of the self-assessment tasks that were part of the implementation, and as result showed an increasing interest and commitment towards their own learning. Similarly, Al Safadi (2017) confirmed that CSR approach has positive effects on Palestinian ninth graders' reading comprehension skills, reading motivation and learning English motivation. In the university setting, Fan's study (2009) affirmed the positive impact of Collaborative Strategic Reading (CSR) on reading comprehension of 110 Taiwanese university students who had low-intermediate to intermediate level of English. Moreover, CSR proved to be effective in improving critical reading of EFL university students majoring in English literature (Khonamri, & Karimabadi, 2015). Furthermore, CSR has resulted in developing reading comprehension of EFL university students in an ESP course in electronics (Ziyaeemehr, 2012).

### **Self-Regulated Strategy Development:**

SRSD is a research-validated model that combines the CSI with evidence-based recommendations for writing instruction to improve students' planning, production, and revision of texts. Instruction using SRSD follows the six steps of CSI (i.e., develop and activate background knowledge, discuss the strategy, model it, memorize it, support it, and perform it independently).

The Self-Regulated Strategy Development Model (SRSD) teaches strategies for planning, revising, and managing the writing processes in conjunction with procedures for regulating the use of these strategies as well as regulating any undesirable behaviors that might impede a student's writing development. Students with writing difficulties often struggle with the planning, composing, and revising skills required for effective writing (Mason, Harris, & Graham, 2011). SRSD encompasses a number of validated planning and writing strategies for stories, persuasion, and informational text, and revising strategies. Each strategy includes a mnemonic acronym for learning the strategy steps (Harris, Graham, Mason, & Friedlander, 2008).



Teachers of students struggling with writing can teach a general writing strategy that can be used with multiple genres. For example, the POW (**P**ick my idea, **O**rganize my notes, **W**rite and say more). Another example, the PLAN (**P**ay attention to the prompt, **L**ist main ideas to develop your essay, **A**dd supporting details, **N**umber major points) and WRITE (**W**ork from your plan to develop a thesis statement, **R**emember your goals, **I**nclude transition words for each paragraph, **T**ry to use different kinds of sentences, **E**xciting words) supports students informative writing across a number of writing elements and conventions.

In addition, several revising strategies have also been validated for students with writing difficulties. The SCAN strategy helps students revise their writing to check each of their sentences for clarity, relevance, and grammar errors.

1. Does it make **S**ense?
2. Is it **C**onnected to my belief?
3. Can you **A**dd more?
4. Note errors and use COPS

Moreover, COPS helps with surface revisions (i.e., capitalization, punctuation, spelling, and overall appearance). COPS assist writers in organizing and editing their works.

1. Capitalization: capitalize proper nouns and beginnings of sentences
2. Overall appearance: Order and organization (sequence events correctly)
3. Punctuation: end of sentences, commas, and quotation marks
4. Spelling

The POW strategy has been effectively combined with strategies for planning and composing stories and for persuasive writing. Thus, teachers should stress the importance of selecting the right genre planning strategy for the O, organizing notes, in POW to help students move flexibly from one genre to another. See figure 2 for additional writing strategies that may be used in combination with POW.

**Figure 2. The POW Strategy for Different Writing Genres**  
(Adapted from Harris, Graham, Mason, & Friedlander, 2008)

<p><b>The POW-TREE Strategy for Persuasive Writing</b></p> <p><b>P</b>ick an idea.  <b>O</b>rganize notes.              <b>T</b>opic sentence.              <b>R</b>easons – at least three.              <b>E</b>xplain each reason.              <b>E</b>nding.  <b>W</b>rite and say more.</p>
<p><b>The POW + C-SPACE Strategy for Narrative Writing</b></p> <p><b>P</b> - Pick and idea</p>

(Choose from brainstormed ideas, story starters, topic ideas bank)

**O - Organize my notes** (Use the C-SPACE strategy to organize story ideas)

- Characters (Specify the main character with a name, traits and supporting characters)
- Setting (When and where the action takes place)
- Purpose (Goal of a character)
- Action (Events and central plot; What is done to achieve the goal?)
- Conclusion (The results of the action; Was the goal achieved?)
- Emotions (How does the main character feel?)

**W - Write and say more** (Check all parts in the story and add more to your story).

Furthermore, Lienemann, Reid, and the IRIS Center (2009) presented the W-W-W, What 2, How 2 strategy that helps students to systematically plan and organize their narratives when used with the SRSD model (see figure 3). Such a strategy has been scientifically validated and has been shown to improve students' narratives and story writing.

**Figure 3. The POW + W-W-W, What 2, How 2 Strategy for Narrative Writing**  
(Adapted from Harris, Graham, Mason, & Friedlander, 2008)

Pick an idea for my story.

**Organize my story using WWW, What=2, How=2**

- Who** is the main character?
- When** does the story take place?
- Where** does the story take place?
- What** does the main character do or want to do? What do other characters do?
- What** happens then? What happens with the other characters?
- How** does the story end?
- How** does the main character feel? How do the other characters feel?

**Write and say more.**

Additionally, Harris, Graham, Mason, and Friedlander (2008) presented STOP and DARE as one of the SRSD strategies which students can use to plan and organize persuasive essays. The strategy has two mnemonics components, which are designed to emphasize reflection and planning.

A. The **STOP** mnemonic helps students to plan and organize their persuasive essays.

- **Suspend Judgment:** Students consider each side of the topic before taking a position.
- **Take a Side:** Determine which side will have the strongest argument or which side you believe in.
- **Organize Ideas:** Select ideas that make powerful arguments by putting an asterisk next to the ideas that you want to be sure and use. Identify several arguments that you will refute. Put your ideas in numerical order.

- Plan More as You Write: Keep planning as you continue to write.
- B. Use the **DARE** mnemonic as a reminder to use all of the components of a good essay.
- Develop a Topic Sentence
  - Add supporting Ideas
  - Reject Arguments for the Opposing Side
  - End with a Conclusion

There has been SRSD research with respect to a variety of genres, including personal narratives, story writing (Saddler, 2006), persuasive essays (Harris, Graham, & Mason, 2002), report writing, expository essays (Lienemann, & Reid, 2008), academic writing (Hammann, 2005) and writing tests (De La Paz, Owen, Harris & Graham, 2000). Furthermore, SRSD produces significant and meaningful improvements in students' development of planning and revising strategies, including brainstorming, self-monitoring, reading for information and semantic webbing, generating and organizing writing content, advanced planning and dictation, revising with peers, and revising for both substance and mechanics (Graham, & Harris, 2003). In addition, SRSD has resulted in improvements in four main aspects of students' performance: quality of writing; knowledge of writing; approach to writing; and self-efficacy, effort, or motivation (García, & Fidalgo, 2006; Harris, Graham, & Mason, 2006). Across a variety of strategies and genres, the quality, length, and structure of students' compositions have improved. Depending on the strategy taught, improvements have been documented in planning, revising, content, and mechanics.

SRSD has proven to be a versatile approach for improving writing, as it has improved the writing performance of students with learning disabilities (Saddler, 2006), students with attention deficit hyperactivity and behavioral disorders (Lane, Harris, Graham, Weisenbach, Brindle, & Morphy, 2008; Mason, & Shriner, 2008), at-risk writers including students with and without disabilities (Lienemann, Graham, Leader-Janssen & Reid, 2006), and regularly achieving writers (Tracy, Graham & Robert, 2009).

Regarding self-regulated learning in the context of EFL, El-Henawy (2012) found that training prospective EFL teachers on using self-regulated strategies (STOP&DARE) was highly effective in enhancing writing metacognition, writing self-efficacy, and argumentative writing performance. Similarly, Fahim and Rajabi (2015) found that self-regulated strategies (POW+TREE) enhanced the writing performance and motivation of 60 Iranian pre-intermediate EFL learners majoring in English Language Teaching in the Faculty of Foreign Languages at the Islamic Azad University. Additionally, Samanian and Roohani (2018) found that the SRSD

(POW+PLEASE) instruction improved descriptive writing skills and reflective thinking of 15 Iranian EFL learners enrolled in an advanced English course at the Iran Language Institute.

According to the previously mentioned literature and studies, it can be concluded that SRSD instructional model emphasizing the use of cognitive strategies has proven to be effective in enhancing the writing of students with learning difficulties as well as regular learners. It is the solid foundation of Self-Regulated Strategy Development as well as the many successes achieved through the use of the instructional model that has led to this present study.

## **METHODOLOGY**

### **Design of the study**

To address the research questions, the study utilized a mixed-method to gain a better and complex understanding of the study variables. This mixed-method study involved both quantitative and qualitative techniques using a variety of tools for collecting and analyzing data. The first tool was using the pre-intervention interview where open-ended questions were posed to the teacher. Besides, a survey was used for assessing teachers' views about action research. The actual action research reports written by the teacher were also used as a source of data. Additionally, students' performance growth and gains were explored through their scores of the tests conducted within each action research.

### **Participants**

The treatment group consisted of thirteen English teachers and their students: six teachers chose to implement CSR and seven teachers chose to implement SRSD. The participants vary in the teaching experience that ranged from 1-30 years. They were enrolled in a professional diploma of curricula and methods of teaching at the Faculty of Education, Port Said University. The researcher trained the participating teachers on CSI and AR through the course titled *Field Project-1 (05639)*.

### **Data Collection**

As the study involves a mixed-method research design, which draws on qualitative and quantitative research methods, data collection included a semi-structured interview, a survey for assessing teachers' perceptions about AR, action research reports, and tests for assessing students' improvements in either reading or writing.

#### **1. Teachers Focus group Interview**

As a form of pre-intervention assessment, the participating teachers were asked some open-ended questions to investigate their knowledge and practices concerning reading and writing instruction before starting the professional

development training sessions. The interview was conducted in a focus group discussion mode to allow the participating teachers' express themselves freely and honestly in order to gain insights about their background knowledge about reading and writing instruction. Focus group interview, as qualitative data collection method, refers to a small group interview of 4-12 people with a facilitator/moderator for 1-2 hours discussing a selected topic in a non-threatening environment to explore participants' perceptions, attitudes, feelings, ideas utilizing group interactions (Wilson 1997). In educational research, focus groups represent group-based interviews which allow the researcher to gather in-depth information and expose the differences, contradictions, unique experiences, views, perceptions and attitudes expressed by a small group of participants (Winlow, Simm, Marvell, & Schaaf, 2013). Eight teachers were interviewed as a group for approximately 30 minutes. This entry group interview encompassed questions exploring teachers' perceptions in two areas: knowledge about learning strategies and teaching strategies in general as well as reading and writing strategies in particular, besides teaching strategies that they frequently use for teaching their students reading and writing.

## **2. Teachers Action research survey**

For this study, a modified questionnaire of O'Connor, Greene, and Anderson (2006) was utilized to explore the impact action research on the teacher's learning and on student achievement. The original survey encompassed 14 items divided into three parts: the first 5-item part, inquired about the level of difficulty of elements of action research; the second 5-item part, explored the teachers' perceptions about conducting action research; the third 4-item part, investigated how participation in action research influenced teachers' instructional practices and problems. For the purpose of the study, the current researcher made some modification to this survey. One item about reflection, as one of the essential elements of conducting action research, was added to part one. Besides, two items about faculty monitoring action research and initiating professional practices, as vital elements of professional development that is the aim of the current research, were added to part two. As for the third part, item no. 12 that examined the effect of AR on teaching, which was similar to the one about instructional practices, was replaced a question about the most important concept they learned about action research. The questionnaire consisted of three parts that reflect perceptions and challenges faced by the teacher in doing action research. The first part consisted of six statements regarding the experienced difficulty with the components of the action research process using a 5-point Likert scale format of 1 to 5 representing no difficulty, a low level of difficulty, a moderate level of difficulty, a high level of difficulty, and an extreme level of difficulty respectively. The second part

consisted of 7 statements regarding the value of their action research experience using a 3-point Likert scale format of 1 to 3 representing disagree, neutral, and agree respectively. The final section of the survey had four open-ended questions.

### **3. Action research reports & lesson plans:**

The EFL teachers action research reports were utilized as evidence of the impact of the PD by evaluating them using a rating scale which is constructed in the light of reviewing literature about developing and evaluating action research (Alberta Teachers' Association, 2000; Check, & Schutt, 2011; Madden, 2011; University of San Diego, 2011). This scale has five rating levels (1= Unsatisfactory, 2= Needs Improvement, 3= Acceptable, 4= Very Good, and 5= Excellent) and ten dimensions (cover page, introduction, literature review, methodology, results and discussion, implications and recommendations, reflections, references, appendices, and quality of writing). Each dimension was graded out of "5" representing the level of competency achieved for each domain. Besides, the teachers' lesson plans were reviewed to explore the extent to which they are aligned with CSI practices. Each component of CSI was checked including the six stages of CSI, strategies of the adopted model, and materials used.

### **4. Assessing Students' Improvement**

In this study students' improvements in either reading or writing performance were utilized as evidence of the effectiveness of the treatment. Each test was designed by the English in-service teacher participating in this study as a part of her/his action research. Tables (3) and (4) represent a detailed description of the utilized tests. Pre-tests were administered before the implementation in order to have an initial record of student's reading or writing performance and to design the intervention according to their actual needs. The pre-tests were examined by experts in EFL in order to know if instructions were clear and if the tests were easy to follow. After the CSR/SRSD implementation, post-tests were administered in order to determine whether students had made progress on their reading or writing skills.

*Table 3. Description of reading tests used in action research.*

<b>Teacher</b>	<b>Grade</b>	<b>Test description</b>
Sar	6th grade	Two equivalent reading tests were designed. Each test included a reading passage followed by six questions assessing literal, inferential, and evaluative reading skills.
Sall	7th grade	Two equivalent reading tests were designed. Each test included a reading passage followed by five questions assessing literal, inferential, and evaluative reading skills.
Man	7th	Two equivalent reading tests were designed. Each test

	grade	included a reading passage followed by three main questions with 11 items assessing literal, inferential, and evaluative reading skills.
Sha	8th grade	Two equivalent reading tests were designed. Each test included a reading passage followed by six questions assessing literal, inferential, and evaluative reading skills.
Ala	8th grade	Two equivalent reading tests were designed. Each test included a reading passage followed by six questions assessing literal, inferential, and evaluative reading skills.
Aya	10th grade	Two equivalent reading tests were designed. Each test included a reading passage followed by five questions assessing literal, inferential, and evaluative reading skills.

*Table 4. Description of writing tests used in action research.*

Teacher	Grade	Test description
Zeï	5th grade	Two equivalent writing tests were designed. Each test included four main questions that required the students to (1) rearrange words to form well-structured sentences, (2) describe a picture with a suitable sentence, (3) form questions with answers for given pictures, and (4) punctuate two given sentences correctly.
Mon	6th grade	The pre-test was a paragraph writing question asking students to “write four sentences about ice-cream”. The post-test was a paragraph writing question asking students to “write four sentences about the museum”. Students’ performance was assessed utilizing a four-domain analytic rubric covering content, grammar, spelling, and punctuation.
Elh	6th grade	The pre-test was a paragraph writing question asking students to “write four sentences about ice-cream”. The post-test was a paragraph writing question asking students to “write four sentences about the museum”. Students’ performance was assessed utilizing a four-domain analytic rubric covering content, grammar, spelling, and punctuation.
Sal	7th grade	The pre-test was a paragraph writing question asking students to “write a paragraph about your fathers’ job”. The post-test was a paragraph writing question asking students to “write a paragraph about the last time you went shopping”. Students’ performance was assessed utilizing a five-domain analytic rubric covering topic sentence,

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		supporting sentences, concluding sentences, mechanics, and appearance.
Moh	7th grade	The pre-test was a paragraph writing question asking students to “write a paragraph about your favorite food”. The post-test was a paragraph writing question asking students to “write a paragraph about shopping”. Students’ performance was assessed utilizing a four-domain analytic rubric covering content, idea development, organization, and language use.
Yas	8th grade	The pre-test was a paragraph writing question asking students to “write a paragraph about a person you admire”. The post-test was a paragraph writing question asking students to “write a paragraph about your future plans”. Students’ performance was assessed utilizing a four-domain analytic rubric covering content, grammar, spelling, and punctuation.
Zay	8th grade	The pre/post-test was a paragraph writing question asking students to “write a paragraph about a person you admire”. Students’ performance was assessed utilizing a four-domain analytic rubric covering content, grammar, spelling, and punctuation.

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### **Treatment of the study**

In the present study, the treatment was distributed over a period of nine weeks and it was divided into two parts. The treatment was applied throughout the first term of the academic year 2016-2017. In the first parts, the participating EFL in-service teachers received 5 weekly 3-hours sessions at the beginning of the first academic semester (15 total hours of training based on university classroom instruction) to develop their professional knowledge for teaching reading and writing, knowledge about cognitive instruction and the selected models as well as action research. Training about action research included introducing action research (i.e. definition, significance, and phases), problem specification methods and techniques, literature review, data collection, organization, data analysis and interpretation and effective presentation techniques with models of other English teachers’ action research. In addition, the teachers in two cooperative groups were scaffolded in analyzing and evaluating a sample action research report using an action research checklist that was utilized later for evaluating their own AR reports. Training about cognitive strategy instruction presented answers for the following questions: What is CSI? Why should teachers use CSI? How is CSI applied in the classroom? Then, the models of CSI were presented including collaborative strategic reading, self-regulated strategy development, and reciprocal teaching. The



researcher utilized various CSI instructional materials for presenting CSI sub-strategies including: (a) collaborative strategic reading materials such as learning logs, cue cards, and clunk cards, and (b) self-regulated strategy development materials such as POW-TREE cue sheet, STOP and DARE cue sheet, SCAN cue cards and cue sheet, COPS checklist, POW + C-SPACE cue sheet, and POW + WWW, What = 2, How = 2 cue sheet. Some of these materials were utilized later by the teachers in their classroom instruction.

As for the second part of the treatment, EFL in-service teachers were encouraged to specify the targeted skill that their students need to enhance (either reading or writing) and select the model they intend to implement (either CSR or SRSD) within their action research. This part aim was allowing the teachers to practice the selected two models of cognitive strategy instruction for enhancing school students' reading and writing performance. The researcher, as the university instructor of the course, took a coaching role to support the teachers through weekly face-to-face mini-conferences and via electronic support. The teachers were coached throughout the process of developing their action research which encompassed stating the research question, specifying the sub-skills, designing the tests, preparing the lesson plans to implement the training content in their classrooms, analyzing data and interpreting results, and preparing the action research reports.

## RESULTS AND DISCUSSION

The results of the study will be presented in terms of the quantitative and qualitative indicators of development in English teachers' perceptions and practices along with students' gains that are indicated by the results of the study instruments. Triangulating results from interviews, surveys, lesson plans, action research reports, and tests afforded a more valid assessment of the effects of the treatment than using any one of those measurements alone. The findings of teachers' action research survey and analyzing the action research reports were utilized to answer the first question of the study. In order to answer the second and the third questions of the study, the results of analyzing the lesson plans developed by the teachers within their action research were interpreted. Besides, the in-service teachers' reflections on using CSI models were compared to their responses to the pre-treatment group interview. In order to answer the fourth and the fifth questions of the study, improvements in the students' reading and writing performance were calculated by gains utilizing the informal tests developed and conducted within the participating teachers' action research.

### 1. Results of the teachers Focus group interviews

An in-depth analysis of the entry group interview was conducted in order to identify the teachers' knowledge and pedagogical practices related to reading and writing. To avoid redundancy, the researcher summarized the participant's responses which were limited and repeated reflecting a little pedagogical knowledge. Data from the focus interviews indicated teacher knowledge of the difference between learning strategies and teaching strategies was limited to connecting learning strategies to learners and connecting teaching strategies to teachers. Teachers were able to name some teaching strategies (e.g. questioning, discussion, brainstorming, role-play, and games), but they were not able to name any of the learning strategies. In addition, when they were asked about reading skills and reading strategies, they mentioned many (e.g. skimming, scanning, predicting, and summarizing), but they were not able to specify if they are skills or strategies. When they were asked about writing skills and writing strategies, their responses were limited to some writing skills (e.g. correct spelling, command of grammar, correct punctuation). They were not able to add more skills such as those related to content or organization or to mention any writing strategies. This could be because the writing question in the Egyptian examinations of the English language focuses mainly on mechanics. When the participants were asked about their frequent pedagogical practices concerning reading and writing, they repeated the teaching strategies mentioned before in the first question for teaching reading and they indicated that writing is taught by modeling and imitation. The entry group interview indicated a little perspective among the participants regarding reading and writing instruction.

## 2. Results of the teachers' action research survey

Findings from the survey related to the participating teachers' experienced difficulties with the elements of action research and perceptions in conducting action research are explored by calculating the frequencies and percentages (see Tables 5 & 6). To quantify the result of part one of the survey, the percentages of no difficulty and a low level of difficulty were combined against the percentages of a high level of difficulty and an extreme level of difficulty (see Table 5).

*Table 5. Teachers' experienced difficulties with elements of action research.*

Statements	no difficulty/a low level of difficulty		a moderate level of difficulty		a high / extreme level of difficulty	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
1. Defining the research question	12	92.3%	1	7.7%	0	0%
2. Writing the literature	3	23.1%	9	69.2%	1	7.7%

review						
3. Developing the methodology	3	23.1%	4	30.8%	6	46.2%
4. Analyzing the data	2	15.4%	8	61.5%	3	23.1%
5. Presenting the findings and implications	2	15.4%	9	69.2%	2	15.4%
6. Reflecting on your action research	4	30.8%	8	61.5%	1	7.7%

The data presented above in Table 3 shows that the majority of the participating teachers 92.3% perceived ‘defining the research question’ as the easiest element of conducting action research, while 46.2% found that ‘developing the methodology’ was the most difficult part of action research. This could be because they are not familiar with the concept itself, as they had not conducted research before, and that it includes various aspects to cover.

*Table 6. Teachers’ perceptions of doing action research.*

Statements	Agree		Neutral		Disagree	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
1. Action research is valuable to the teaching and learning process for me as a teacher.	8	61.5%	5	38.5%	0	0%
2. Action research is valuable to the teaching and learning process for my students.	7	53.8%	6	46.2%	0	0%
3. This action research project	6	46.2%	7	53.8%	0	0%

Statements	Agree		Neutral		Disagree	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
positively impacted my students' learning.						
4. This action research project positively impacted my teaching.	8	61.5%	5	38.5%	0	0%
5. I view myself as a teacher-researcher	7	53.8%	5	38.5%	1	7.7%
6. I benefit from cooperation with the university faculty in developing my action research	10	76.9%	3	23.1%	0	0%
7. I initiate other teachers' professional development practices based on my training	6	46.2%	4	30.8%	3	23.1%

The table above clarifies the extent to which the majority of the participating teachers believed that doing research is valuable to the teaching and learning process both for them and their students. Most of the respondents 76.9% agreed that receiving coaching and monitoring from the university faculty helped in designing and conducting action research. Besides, a moderate number of the respondents 46.2% believed in initiating other professional development practices such as organizing school workshops or presentations to transform this knowledge

to colleagues, participate in collaborative action research, attending conferences and workshops in TEFL, or joining online communities for ELL and ELT.

Part three encompassed four open-ended questions that focused on the impact of action research on current and future instructional practices and the challenges the participating teachers faced while engaging in action research. Data were organized into four categories: knowledge about action research, the impact of action research on instructional practices, problems with action research, and the long-lasting impact of action research. To illustrate these four themes, a selection of comments from the survey are provided as follows:

Knowledge about action research and the use of research skills. When teachers were asked about the most important concept they learned about action research, they demonstrated growth of knowledge about action research as a method of professional development, as evidenced in comments like the ones below:

Yas: It brings theory and practice together and allows teacher to reflect and act.

Sall: Action research is just a beginning to a higher level of researches.

Aya: I've learned that students' achievements may be not low because of their abilities only. It might be the strategies, practices, etc. the teacher uses that are not convenient to them , so action research helps teacher figure out the solution to any problem the teacher faces with his/her students.

Sal: How to be a researcher and how to look for the exact information you need.

Impact of action research on professional practices. When teachers were asked 'How has your action research informed your instructional practices?', they related conducting action research to making instructional decisions, the sensitivity of students' needs, and checking the impact of teaching strategies. These beliefs were portrayed in the following excerpts of some teachers.

Aya: It taught me focus more on students' educational problems and how can be solved by searching more for the roots of these problem through literature review, as well as applying methods or techniques and test their effect on improving students' academic achievements.

Yas: It provided me with scientific steps to apply any new strategy with students and how to measure its success.

Man: It helps us to diagnose problems or weaknesses –whether organizational, academic, or instructional –and help us develop practical solutions to address them quickly and efficiently.

Problems with action research. When teachers were asked about challenges and problems arose while engaging in action research, most of them referred to time issues and writing the action research report. They believed that additional time was needed to train school students more on the CSI to reach the independent

use of the strategies. Besides, more time was required to finish writing the action research report. The following excerpts illustrate some of the problems and how teachers tried to manage them.

Sal: TIME was a problem, because it took me so long time to understand how to transform what you're doing into words, so the time left wasn't enough for me. Knowing how to form an action research paper was a difficulty for me so I read many action researches to get to the final form of my action research.

Sall: Timing, as my students became busy preparing for term examination.

Zay: The absence of some students who have already done the pre-test while we are doing the post-test. It takes a lot of time and effort to define the names of the students who did the pre and post-test and have been exposed to the intervention.

Yas: Writing the action research report was my biggest problem as I didn't write one before and I overcame it by reading as many action researches as I could.

Man: To me as a supervisor, I had no time to implement my project, so I asked a teacher to implement my project and the teacher's attitude was one of my biggest problem.....The teacher who was in charge of implementing the strategy wasn't enthusiastic.

Aya: While applying the action research on my students, I faced problems of timing that was not enough to engage students in my new strategy, as well as students' large number inside the class. I tried to resolve the former by using aids as well as social media website to help students learn more about the definition, usage, steps of my strategy. For the problem of students' large number, I divided the class into groups, assigning a leader for each group

The long-lasting impact of action research. When teachers were asked about the long-lasting effect of engaging in action research project on their teaching, they mentioned a variety of effects that are not only limited to teaching practices but also connected to their growth mindset and professional practices. These positive impacts were portrayed in the following responses:

Zay: The long-last effect is that I now have a great desire to be knowledgeable especially about teaching and learning strategies. Our students receive with pleasure any kind of changeability in our way of teaching.

Sal: Looking for new strategies, knowing my students' weak points throw surveys and tests and using these strategies to overcome these weaknesses, measuring the progress of your students.

Sha: Teachers ' inquiry mindsets can be facilitated through teaching them the process and procedures of action research so I think I'll encourage professional teachers to conduct action research projects in their classroom.

Aya: I think the long-lasting effect will be the strategy I tested its efficiency in developing students' reading skills otherwise a new action research will be conducted by me showing much more impact on developing reading skills that the previous one

Man: Improvements in teaching methods and strategies. Improvements in knowledge and use of research skills. Increase in teaching motivation. Better understanding of students' needs. Improvements in school's materials /syllabuses. Benefits from collaboration. Initiating other teachers' professional development.

Yas: It will be believing that whenever I face a problem with my student, there's a scientific way that I can follow to overcome this problem and assess the result.

Based on the findings, it can be concluded that though the participating teachers faced various challenges and problems in conducting their own action research, they assured the positive effect of conducting AR on their professional growth as well as on their students' learning. They believed that it improved their knowledge about their students and encouraged them to think critically and reflectively about their instructional practices and classroom problems. The findings of the AR survey are consistent with the later findings of analyzing the action research reports and teachers' reflections.

### 3. Results of analyzing the action research reports & lesson plans

The results revealed remarkable improvement in conducting AR and writing its report after the treatment. Table (7) presents the results of assessing the action research reports prepared by the teachers. It demonstrated that the most efficiently developed elements of AR were the cover page and the appendices. Besides, the means of the methodology part demonstrated that, though the previously mentioned difficulty by the participants, it was well-developed and managed by the participating teachers.

*Table 7. Results of action research reports as assessed by the rating scale*

Elements of the action research report	Mean	Std.	Range
1. Cover page	4.231	0.927	(2-5)
2. Introduction	3.273	1.251	(1-5)
3. Literature Review	3.091	0.555	(2-4)
4. Methodology	3.364	1.127	(2-5)
5. Results and Discussion	3.182	0.832	(2-5)
6. Implications and Recommendations	3.727	1.391	(1-5)
7. Reflections	3.455	1.601	(1-5)
8. References	3.091	1.405	(1-5)
9. Appendices	4.455	0.927	(2-5)

<b>Elements of the action research report</b>	<b>Mean</b>	<b>Std.</b>	<b>Range</b>
10. Quality of writing	3.818	0.689	(2-5)
<b>Total</b>	<b>35.231</b>	<b>5.262</b>	<b>(27-45)</b>

The table above shows that the means of all elements ranged from 3.091 to 4.455 which represent acceptable and very good levels. From the presented data, it can be noted that professional development training was effective in leveraging the skills of developing and conducting action research among the teacher-participants.

Furthermore, analyzing the CSR lesson plans developed by the teachers, it was found that they cover the six stages of CSI, but one teacher engaged the students directly with using the strategies of CSR. Though all lesson plans referred to students working cooperatively in groups to apply the four strategies of CSR, the roles of the members of CSR group which include: group leader, clunk expert, gist expert, and note-taker/timekeeper were not mentioned. As for the instructional materials, lesson plans mostly utilized pictures to elicit discussion, CSR handouts or wall charts to illustrate the stages and strategies of CSR, and ‘CSR learning logs’.

Besides, analyzing the SRSD lesson plans developed by the teachers, it was found that they mainly utilized ‘COPS’ strategy and four teachers mixed it with ‘POW+TREE’. However, none of them referred to the six stages of CSI but one teacher. As for the instructional materials, lesson plans mainly used handouts of the strategies, flashcards and wall charts of the strategies, and checklists for revising the writings. Besides, some lessons employed ‘paragraph burger’ wall chart, SWAG handouts, and transitional words handouts. The lesson plans demonstrated moderate expertise in transforming the professional development training they received in AR and CSI into practice.

#### **4. Results of the Students’ reading/writing performance tests**

Results of students’ assessment in reading and writing performance showed modest but significant effects in many classrooms whose teachers received professional development in utilizing models of cognitive strategy instruction particularly collaborative strategic reading and self-regulated strategy development. Tables (8) and (9) tabulated the students’ means of scores pre and post the intervention and the learning gains in reading and writing.



*Table 8. Results of the participants in CSR intervention*

Teacher	Students Grade	Students Number	Students' Mean of Scores		Gain
			Pre-Intervention	Post-Intervention	
Sar	6th grade	15	4.9	5.7	.8
Sall	7th grade	10	1.5	4.2	2.7
Man	7th grade	18	3.7	8.4	4.7
Sha	8th grade	20	1.1	4.6	3.5
Ala	8th grade	8	7.5	10	2.5
Aya	10th grade	17	3.7	8.5	4.8

*Table 9. Results of the participants in SRSD intervention*

Teacher	Students Grade	Students Number	Students' Mean of Scores		Gain
			Pre-Intervention	Post-Intervention	
Zei	5th grade	35	8.7	11.4	2.7
Mon	6th grade	16	6.3	11.8	5.5
Elh	6th grade	20	4.3	4.9	.6
Sal	7th grade	6	6.8	12.2	5.4
Moh	7th grade	5	4	7.7	3.7
Yas	8th grade	20	3.7	6.6	2.9
Zay	8th grade	18	6.1	8.4	2.3

From the presented data in tables (8) and (9), which illustrate the mean score differences on the pre-measurement and post-measurement of the students' reading or writing performance, it can be noted that all scores on the post measurements were higher than theirs on the pre measurements. Findings revealed that the students whose teachers participated in the professional development that incorporated AR and CSI exhibited improvements in their English reading/writing performance. However, table (8) shows that CSR was not working with elementary students at a satisfactory level while the gains were significant with secondary students. Besides, when comparing students' gains in reading to students' gains in writing, it revealed that the average of CSR students' gains was not as great as this of SRSD students.

It is important to note that in addition to utilizing students' improved performance as evidence of the effectiveness of the treatment, teachers' reflection in their action research reports provided evidence of the effectiveness of the treatment as well. Teachers' reflection on employing either CSR or SRSD was utilized as a teachers' appraisal of the CSI intervention.

Implementing CSI (POW + TREE+ COPS) has made obvious change concerning students' motivation, performance and attitude towards writing. Before, they thought that they are not good enough to write a paragraph in English, but now they have the tools and the confidence to write a good and a readable paragraph. (Extracted from Yas' action research report)

Using CSI (COPS) made students became more confident about their writing. They were so excited to find out their own mistakes and mark their own writing using their checklists. (Extracted from Zei's action research report)

CSR maximized the students' involvement and active participation. They were enthusiastic doing group tasks. (Extracted from Sha's action research report)

CSR raised the spirit of cooperation and students became more confident and knowledgeable about reading. (Extracted from Aya's action research report)

CSR enabled students to better understand the material in their reading assignments and improved their group work skills. (Extracted from Ala's action research report)

The results of the present study suggest that the PD had moderate effects on the teachers' research skills and less effects on their students' performance. A number of explanations for the moderate to little effects of the PD program could be as follows:

- the duration and timing of the teachers training; if the training was extended for two terms or including the summer vacation, the training program might have been more successful. Future in-service professional development activities might be conducted during the summer vacation especially that it extends for more than two months.
- the duration of the classroom implementation might be short. The students might have needed more time to grasp and assimilate the strategies before implementing them independently. Some teachers stated that CSR was not easy for the students to master. "Students found it difficult to use the third and the fourth fix-up strategies and they needed more time to understand how to use prefixes and suffixes when faced with clunks." (Extracted from Aya's action research report).

Based on the findings of this study, it could be stated that engaging teachers in developing and conducting action research benefits the teachers in several aspects of their professional development. Action research provides teachers with opportunities to be active professional learners and be immersed in deep learning. Comparing the teachers' responses in the pre-treatment interview to their responses on the open-ended questions of the survey and their reflections within their action research reflects a significant growth in their pedagogical and professional knowledge. Teachers learned to assess students' progress and evaluate the effectiveness of their own instruction. Overall, the participating teachers as researchers developed new skills such as reflecting on their students' performance and their teaching practices, reading academic research, collecting, analyzing, and interpreting data, transforming their professional knowledge into practice which scaffold their professional identity growth.

These findings are consistent with prior work of Klapwijk (2012), Sailors and Price (2010), and Olson and Land (2007) showing that educating teachers about instructional models that encompass learning strategies promotes their understanding of the learning processes, resulting in improves in their instructional practices and making their students better learners. Additionally, the findings are consistent with previous research about teacher professional development (e.g., Yigit & Bagceci, 2017; Hathorn & Dillon, 2018) which asserted that action research is a meaningful model of PD that allows teachers to be immersed in deep and authentic professional learning. Unlike previous professional development research that investigated teachers' perceptual changes or beliefs related to the utilized treatment (e.g., O'Connor, Greene, & Anderson, 2006; El-Bassuony, 2011; Shanks, Miller, & Rosendale, 2012), the present study additionally examined performance gains of the students whose teachers participated in the PD as evidence of the impact of the present professional development.

To conclude, the present study managed to foster teachers' interest in learning new teaching methods and the desire for improving their practices. This involved providing teachers with opportunities to learn to evaluate and reflect on the effectiveness of their own teaching and to receive guidance in translating knowledge about reading and writing into classroom practices. In-service teachers developed their skills as reflective practitioners, collecting and analyzing data to monitor the effectiveness of teaching practices and student learning.

## **IMPLICATIONS AND RECOMMENDATIONS**

The findings of the present study have numerous important pedagogical implications for teacher educators, teachers of the English language, the Ministry of Education and curriculum developers. The most obvious pedagogical implication of the study is derived from the findings that for promoting effective teaching and meaningful learning teachers and educators need to better understand their students and scaffold them with strategies that help students to manage their own learning and enhance their performance. The researcher offers some implications and recommendations as listed below:

- To achieve the targets of EFL education, teachers need to be empowered with knowledge about the process of language learning and strategies. EFL teachers need to be trained on learning strategies as well as teaching strategies.
- There should be a balance of the time spent on teaching reading and writing processes and strategies. EFL Students need to receive more instructional time learning how to scan, skim, connect, and summarize what they read and how to plan, write and revise their compositions.

- Professional development should integrate theoretical knowledge with classroom implications for better results. This is consistent with Garcés and Granada's claim (2016) that researching classrooms and teaching contexts is an issue that should be considered for language teachers as a realistic extension of professional practice.
- To maximize the effectiveness of professional development there should be a partnership between teacher education institutions and schools as universities have the personnel and resources to scaffold teachers and schools afford the field to examine effective PD strategies.

### **FUTURE RESEARCH DIRECTIONS**

The results of this study suggest several possibilities for future studies so as to better understand cognitive strategy instruction and its effect on EFL teachers' professional knowledge, perceptions, and practices as well as its impact on EFL students' performance. The researcher offers some suggestions for further research as listed below:

- Further research is needed to explore the effect of incorporating CSI into special education teachers' preparation and training.
- Furthermore, it would be informative to investigate the effect of CSI models on English language learners' metacognition and deeper learning.
- Another direction for research would be to examine the effectiveness of different CSI models from the teachers' and the students' perspectives.
- Besides, it would be useful to study the effect of integrating other professional development strategies such as study groups or lesson study with action research to enhance English language teachers' professional classroom practices.

Since it was beyond the limits of a single study to consider a wide range of factors, this study has some limitations, which in turn provide some suggestions for further research. Such limitations include characteristics of the sample, data collection and other aspects related to the treatment. All of these variables should be taken into account when evaluating the findings and may influence the generalizability of the findings. These limitations are explained in the following terms:

- A sample of 13 EFL in-service teachers at Port-Said participated as an experimental group. Lacking a control group and the small sample size of the current study decreased the generalizability of findings. Future research could duplicate the treatment with a larger and more diverse sample of pre-service and in-service teachers.

- Data collection depends on the self-reported instruments and analysis of the action research. Future research could assess teachers' classroom implementation of CSI using videos and observation checklist.
- The duration of the treatment represents another limitation. Future PD could be extended for longer duration to allow teachers sufficient time to practice and implement the CSI models in their classrooms and to allow students more time to learn the strategies and get enough scaffolding before implementing them independently.

## CONCLUSION

Successful readers and writers use a variety of strategies for understanding and producing texts. Thus, teachers need to be equipped with various approaches and instructional models for training students to be effective readers and writers who manage and control their own learning by using diverse strategies before, during and after reading or writing. For this end, EFL teachers need to be supported with various opportunities to learn that would lead to substantial changes in their classroom instruction and as a result would produce worthwhile learning gains. This study presented professional development for in-service EFL teachers based on integrating cognitive strategy instruction with action research and evaluated the effect of it on their teaching and their students' learning through an interview, questionnaires, tests and an analysis of teachers' lesson plans and action research reports. Results indicated the teachers benefited professionally from learning and conducting action research and managed to implement models of cognitive strategy instruction (collaborative strategic reading or self-regulated strategy development) in teaching EFL reading and writing which in turn improved their students' performance in reading and writing. To sum up, the results of the study can provide the basis for many other treatments based on blending instructional models with action research to develop professional development programs for teachers to produce better learning outcomes in different learning contexts.

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