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**Fostering Strategic Second-Language Writers: A
Study of Chinese English-as-a-Foreign-Language (EFL)
Writers' Self-Regulated Learning Strategies,
Self-Efficacy and Motivational Beliefs**

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**A thesis submitted in fulfillment of the requirements for
the Degree of Doctor of Philosophy in Education (Applied Linguistics)**

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Abstract

This study aimed to explore how self-regulation theory (Zimmerman, 2013) contributes to second/foreign language (L2) learners' writing proficiency from the perspectives of self-regulated learning (SRL) strategies, motivational beliefs and self-efficacy. Composed of two phases, this mixed-methods research was to offer insightful empirical evidence for implementing effective writing instruction with an aim to develop strategic EFL writers.

Phase One aimed to document the current situation of Chinese students' reported use of SRL strategies and their perceived motivational beliefs and self-efficacy; and to investigate how these factors related to writing performance. Data were collected from undergraduate English-major students ($N = 701$) at five medium-ranking universities in Northeast China. Participants were recruited through convenience sampling. They were invited to complete self-report questionnaires designed to measure their reported use of SRL strategies and perceived motivational beliefs and self-efficacy, followed by a writing test to assess their writing performance. Findings showed that year level and writing proficiency were significant factors affecting students' reported use of SRL strategies. Multiple regression analyses revealed that SRL strategies (text processing, goal-oriented monitoring, idea planning and motivational self-talk), motivational beliefs (control of learning and text anxiety) and self-efficacy about EFL writing (linguistic self-efficacy) made significant, independent contributions to students' writing performance.

Phase Two explored how self-regulated strategies-based writing intervention affected students' reported use of SRL strategies, their perceived motivational beliefs and self-efficacy as well as writing performance. A quasi-experimental research design was carried out with 80 English-major students at a medium-ranking university in Northeast China. Participants were recruited through purposive sampling and then randomly allocated to either a control group or an experimental group. Data were collected via self-report questionnaires, writing tests and classroom observations. The same questionnaires as used in Phase One were applied to investigate SRL strategies, self-efficacy and motivational beliefs prior to and after the writing intervention. These

participants were also invited to complete essay writing tests at pre-, post- and delayed post-test stages to investigate changes in their writing performance. The students from the experimental group received self-regulated strategies-based writing instruction, which comprised 16 sessions (1.5 hours per week) to implement four SRL strategies (e.g., text processing, idea planning, goal-oriented monitoring and peer learning). At the same time, the students from the control group received regular writing classes, required by the university curriculum and syllabus (16 sessions of 1.5 hours per week). In this phase, a case study was conducted with two students voluntarily recruited from the experimental group. Data were collected via semi-structured interviews and journals to corroborate quantitative results.

It was found that the students from the experimental group reported a significantly higher level of using SRL strategies than the students in the control group. They also had a higher level of perceived writing self-efficacy (performance self-efficacy) and motivational beliefs (extrinsic goal orientation and task value) than their counterparts in the control group. Although both groups demonstrated improved writing scores, the experimental group students outperformed the students in the control group in the post- and the delayed post-tests. Data collected from two cases corroborated the quantitative findings in Phase Two and provided in-depth information about how strategies-based writing intervention affected students' reported use of SRL strategies and their perceived motivational beliefs and self-efficacy. All these findings led to a conclusion that self-regulated strategies-based writing instruction was successful in promoting EFL students' active use of a range of SRL strategies from a multi-dimensional perspective and in developing a positive attitude towards writing with high motivation and self-efficacy, which contributed to better academic outcomes in EFL contexts.

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Certification by Co-Authors

The undersigned hereby certify that:

- ❖ the above statement correctly reflects the nature and extent of the PhD candidate's contribution to this work, and the nature of the contribution of each of the co-authors; and
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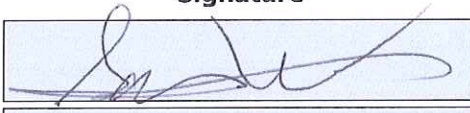
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CHAPTER ONE

INTRODUCTION

There is growing recognition that a fundamental goal of education is to teach students to become self-regulated learners, best characterised as actively and efficiently managing their own learning via deploying various self-regulated learning (SRL) strategies in the learning process (Zimmerman, 2002). A range of research has revealed the primary role of SRL strategies in fostering students' self-regulated capacity and language proficiency in the field of both first (L1) and second language (L2) education (Oxford, 2013; Zimmerman & Schunk, 2011). Zimmerman (2002) regards SRL as a learning process embracing multi-dimensional constructs under the triadic influence of metacognition, behaviour and motivational regulation. Most of the research to date has focused on empirical exploration of cognitive and metacognitive strategies in L1 reading and writing (Harris, Graham, MacArthur, Reid, & Mason, 2011; Stine-Morrow, Miller, Gagne, & Hertzog, 2008). However, there has been little explicit discussion of writing strategies based on SRL theories in L2, especially in regard to English as a Foreign Language (EFL). Neither has the interplay of cognitive, metacognitive, social and motivational regulation strategies been empirically examined within an SRL framework.

Writing is a complex process with “recursive, strategic, and multi-dimensional” characteristics (Harris et al., 2011, p. 188). It requires not only deliberate control over the processes, self-regulation of behaviours and deployment of strategies, but also high levels of motivation and positive self-efficacy in order to deploy the knowledge and strategies in the process of writing (Graham, 2007; Hayes & Flower, 1980). Self-regulation, deployment of strategies, motivation and self-efficacy in writing are particularly challenging for many non-native speakers in EFL contexts. English writing is thus often perceived by many EFL learners as the most difficult and daunting task. This is especially true for Chinese learners who are in the highly daunting situation of requiring English writing skills for passing high-stakes examinations (J. Wang, 2014). For many Chinese students writing in English equates to taking a course, or sitting a test, for which they have low motivation and little confidence in their performance. Yang

and Gao (2013) have stated that EFL writing instruction in China focuses on test preparation at the expense of fostering learners' active role in writing. Furthermore, some researchers posit that, despite scholars' interest in examining EFL writing strategies as cognitive constructs, writing strategies are not integrated into the curriculum and instructional practices at either tertiary or secondary levels (L. Yang & Gao, 2013; Zhang, Aryadoust, & Zhang, 2016). EFL practitioners are often neither equipped with sufficient knowledge about writing strategies in learning to write; nor do they know how to effectively integrate a rich repertoire of writing strategies in teaching (Zhang et al., 2016). Given these problems, how to help Chinese students develop and use a wide range of strategies for learning to write, and how to increase their writing motivation and confidence in their performance, have become critical issues confronting many practitioners in EFL classroom teaching.

1.1 Self-regulated Learning (SRL) Strategies

Self-regulated learning (SRL) refers to learners' participating in learning processes metacognitively, motivationally and behaviourally (Zimmerman & Martinez-Pons, 1986). From sociocognitive theory, SRL is regarded as triadic processes shaped by interactions of personal, behavioural and environmental factors (Winne & Hadwin, 2010). In social cognitive models, SRL emphasises learners' proactive engagement with learning and active management of their own motivations (Zimmerman, 2013). In the self-regulating process, learners intentionally activate, sustain and adjust cognition, affect and behaviour to achieve their learning goals (Zimmerman, 2011).

In the last three decades, SRL theory has attracted increasing attention. It has been demonstrated to improve academic achievement and foster autonomous learning in fields of music, sports, math, science and L1 reading and writing (Harris & Graham, 2009; Schunk & Zimmerman, 2007; Winne, 2011; Zimmerman & Schunk, 2008). Although SRL has proven successful in general learning contexts, insufficient attention has been given to L2 settings (Oxford, 2013).

Research cited above also suggests that the deployment of strategies, the monitoring of learning processes and the adjustment of these strategies are influenced by psychological factors such as motivation and self-efficacy. For example, Zimmerman

and Schunk (2008) have found that highly motivated students outperformed poorly motivated students in terms of paying attention, making progress, making an effort and obtaining more satisfaction in learning processes. Others such as Bandura (1997) have argued that the use of SRL strategies, motivational regulation and academic performance are also determined by students' confidence in accomplishing a task during learning processes. This is known as self-efficacy. Numerous studies have shown that a high level of perceived self-efficacy contributes to the choice of challenges to undertake and to greater persistence and better academic performance (Caprara et al., 2008; Chemers, Hu & Garcia, 2001; Razmjoo & Hoomanfar, 2012; Schunk & Zimmerman, 2007). It has also been found that with positive self-efficacy, students are able to adapt to the rapidly evolving demands of the modern world by actively deploying a range of SRL strategies (Schunk & Zimmerman, 2007). Self-efficacy, as a critical component of SRL, plays "a central role in the exercise of personal agency by its strong impact on thought, affect, motivation, and action" (Bandura, 1991, p. 248). Therefore, it is necessary to explore how the psychological factors of motivation and self-efficacy affect learners' use of SRL strategies in fostering proactive learning in EFL contexts.

1.2 SRL and Metacognition

A range of studies have been conducted on SRL and metacognition in the educational literature and sometimes these two terms were used interchangeably. In order to move the research forward, it is necessary to clarify the conceptual lens on SRL and metacognition for operational functions in language learning research, especially in relation to the present study.

SRL and metacognition have roots in the psychological literature and they both emphasise self-awareness and regulatory action (Schunk, 2008). Metacognition describes the developmental aspects of how one monitors or thinks about one's own cognition (Flavell, 1971). It deals primarily with "reflective abstraction of new or existing cognitive structures" over learner-environment interactions (Dinsmore, Alexander, & Loughlin, 2008, p. 393). Informed by sociocognitive theory, SRL emphasises the reciprocal determinism of the environment on the person, mediated through behaviour (Bandura, 1991). As an integrated theory of learning, SRL

deliberately attempts to address the interaction of cognitive, motivational and contextual factors rather than their isolated contributions (Zimmerman, 2011).

It is apparent that SRL and metacognition are nested constructs that are mutually entailed in their functions in the human thought and behaviour (Kalpan, 2008). Therefore, this study takes a multidimensional perspective, which views SRL as an overarching process, including cognition, metacognition, motivational regulation and social behaviour. Under the SRL model, the metacognitive dimension refers to the use of strategies to plan, monitor and evaluate learning processes. I believe the dimensional perspective allows the two concepts to gradually transfer into each other and may allow researchers and educators to define more clearly the nature of students' self-regulatory action. Detailed explanation of metacognition and SRL will be presented in Chapter Four.

1.3 SRL Strategies in Writing

Aligned with the sociocognitive view, an SRL perspective regards writing activities as being “self-planned, self-initiated, and self-sustained”, which are influenced by cognitive, psychological and social factors (Zimmerman & Risemberg, 1997, pp. 73–74). This means that successful writing not only requires writers' deliberate control over the composing processes, regulation of behaviours and the deployment of strategies but also positive self-efficacy and motivation to deploy the knowledge and strategies during the process (Graham, 2007; Zimmerman & Schunk, 2008).

The contribution of SRL strategies to the enhancement of writing achievement has attracted the most attention in L1 contexts, both descriptive and instructional. Some researchers have compared the differences in strategy use between expert and novice writers and found that expert writers reported using a variety of self-regulatory techniques, whereas novice writers often underestimated the role of planning, revising and other self-regulatory strategies (Harris et al., 2011; Zimmerman & Risemberg, 1997). Other studies have examined the effects of strategies-based instruction on writing attainment. For example, Graham & Harris (2009) and Harris et al. (2011) have investigated how explicit instruction of strategies contributes to promoting active and strategic learning in L1 writing contexts. They have found that these instructional

models play an essential role in fostering students' competence in the self-regulating process. The most popular and well-established model is Harris & Graham's (1996) Self-Regulated Strategy Development (SRSD). The SRSD model was designed to promote students' independent use of the target strategies and accompanying self-regulation procedures. While there is evidence of the salient effect of the strategies-based instruction model on improving academic achievement and cultivating self-regulated learners (Graham & Harris, 2009), research pertaining to the effect of the SRSD model in EFL writing is cursory.

1.3 Research Contexts

1.3.1 English as a foreign language (EFL) teaching in China

English, as a lingua franca in the modern world, plays a pivotal role in political, economic and educational globalisation. In China, its important status is widely recognised and English is perceived as a necessary and critical second, or other, language, for everyone (Chan & Rao, 2010; L. Yang & Gao, 2013). Success in English is considered as a gateway to better education or overseas study, more employment opportunities, professional development and social advancement (Woodrow, 2011). English as a foreign language teaching subject has become high-stakes with a good deal of time devoted to it in school curricula from the third grade in primary schools through secondary and high schools to universities (four-year study for the Bachelor Degree). Scores in English courses are an essential criterion of school and university admission in the contemporary Chinese educational system. Students need to pass an examination in English in high school to enter university, with the top universities demanding the highest grades. At tertiary levels, the practice of English teaching has been nationally regulated the College English Curriculum Requirements (MoE, 2007), which are used as benchmarks for curriculum development, teaching materials compilation and teaching evaluation (Zhang & Liu, 2015). These policies require EFLT to be set up in tertiary education as a compulsory course aiming to improve university students' language competence to meet their career and study needs. University students need to pass several English tests such as College English Test (CET), Bands 4/6, or Test for English Major (TEM), Bands 4/8, as a measure of their English proficiency. University students need to pass several English tests in order to find a satisfactory job because

these test scores are often used as a criterion for recruitment (Woodrow, 2011). If undergraduate students want to apply for the postgraduate programmes in China, they are also required to pass the National English Test, *Postgraduate Entrance Examination*, as a baseline criterion for admission to Chinese universities, or pass the International English Language Testing System (IELTS) or Test of English as a Foreign Language (TOEFL) for studying overseas in English-speaking countries. It is clear that such test-driven learning has had a strong wash-back effect on learners' motivation, which may have led to a lack of intrinsic interest in fostering their language skills and competence (Ma, 2005; Teng & Zhang, 2016a; X. Qin & Wen, 2002).

Consequently a series of innovations in English language teaching pedagogies and curricula have been conducted during the past three decades with the aim of developing different English language skills and competence. The reform of ELT has experienced different stages, from emphasising sentence pattern drills, literacy texts translation, readings, structure, grammar and vocabulary to fostering learners' communicative competence through student-centred approaches (L. Yang & Gao, 2013; You, 2004). Required by the latest teaching requirements for the College English Curriculum (MoE, 2007), English language education at the tertiary level in China is conceptualised as not only the teaching of language knowledge and skills, but also of language learning strategies and cross-cultural communication skills. The policy also calls for an urgent need to cultivate learners' motivation and confidence to regulate their own learning processes and to fully recognise the learner's central place in classroom environments (MoE, 2007). The new teaching policy also emphasises promoting strategic and proactive learners with a rich repertoire of learning strategies to meet the need of lifelong learning. Although great advancements have been made in English language teaching within the past two decades, many students are still demotivated and lack confidence in English learning processes. They also complain about the great pressure of the test-oriented teaching system and report limited knowledge of language learning strategies (Woodrow, 2011). Despite abundant research documenting how expert and novice learners are different (see A. Cohen & Griffiths, 2015; Zhang, 2003, 2010, for reviews), more empirical research on changes to teaching practices in classroom environments is needed.

1.3.2 Teaching of EFL writing in China

Although writing is a required component in the English language teaching curriculum in China, it is often regarded as the most challenging language skill, and one in which Chinese students find it difficult to develop competence (J. Wang, 2014; Zhang, 2013). Many Chinese university students have low writing proficiency, despite previous experience in English learning in schools, and even with continuous practice, improvement has been limited (Zhan, 2012). As noted previously, recent research shows that Chinese students' motivation to learn English writing has been predominantly driven by extrinsic desires for passing examinations, improving employment opportunities or studying abroad (L. Yang & Gao, 2013). As briefly discussed above, such utilitarian motivation for learning English writing is prevalent from secondary school to university (Lee, 2014; Ma, 2005). The teaching of EFL writing is usually test-driven and product-oriented, too, with little attention to cultivating students' own interest and motivation or fostering different learning strategies to help them in learning to write. This is a common situation among all levels of education.

At the tertiary stage, pedagogy in the English class for non-English major undergraduates is designed to foster a comprehensive knowledge of English with a focus on grammar, vocabulary and reading, while speaking and writing courses are usually set up as electives. Writing instruction for non-English major students is usually embedded in a compulsory English course, which is implemented within the first two years of undergraduate study. Writing is taught as a discrete skill, as part of intensive reading classes or integrated English courses, which include listening, speaking, reading, writing, grammar and vocabulary, designed to improve undergraduates' general English skills. The time allocated to writing in the instructional process mostly depends on EFL teachers' individual choices without a consistent syllabus. Some universities also set up an optional writing course for first and second year undergraduates to help them prepare for the College English Test (CET), which is a nationally adopted test battery with two levels, namely, Band 4 and Band 6. The CET was designed as an objective and accurate evaluation of the English proficiency of university students in five aspects: essay writing, translation, listening, reading and grammar (Zheng & Cheng, 2008). Among these skills, essay writing is often regarded as an immense challenge for many

university students. Essay structure is fixed based on the requirement of CET Band 4, which is a four-part structure with little space for creative ideas.

English majors have separate English courses designed for cultivating their English competence, such as reading, writing, listening, speaking and comprehensive knowledge in terms of linguistics, literature, business English and so on. As required by *The English Teaching Syllabus for English Major* (MoE, 2004), English-major students are required to take English writing courses within the first two years of undergraduate study. In the course, these English-major students are instructed on linguistic knowledge and paragraph writing and then genre-based writing such as narration, exposition and argumentation with an exclusive emphasis on organisation models. For these English-major students, another testing system, the TEM Bands 4/8, has been applied. It is designed to evaluate English-majors' English proficiency in reading, writing, listening and translation. This test is a nationally acknowledged assessment for students to demonstrate a certain achievement in language proficiency and it is also regarded as a benchmark of English-major undergraduates' English proficiency for job hunting. The certificates of TEM, Band 4 and particularly Band 8 are critical benchmarks for evaluating the success of university English departments and the professional ability of graduates who plan to continue their career in English-related fields.

Writing instruction in universities, no matter whether it is for English-major or non-English major students, mainly focuses on developing students' declarative and cognitive knowledge ranging from "micro-skills such as orthography and sentence level writing to macro skills such as paragraph and whole text writing" (Woodrow, 2011, p. 511). In class, students are required to familiarise themselves with writing conventions in two ways: 1) Teachers use or analyse writing models with students; or 2) students are required to finish writing tasks independently after class by following the model texts, with no guidance from teachers or communication with peers (H. Zhao, 2010). Scholars such as You (2004) and J. Wang (2014) have pointed out that the curricula, teaching syllabuses, instructional materials and forms of assessment are prescribed by authorities such as the faculty or administrative committees that scrutinise a particular speciality. This product-oriented and teacher-centred form allows for relatively little scope in instructional variety or students' involvement in the learning process. As Yang and Gao

(2013) have argued, such a test-focused curriculum and pedagogy deprives students of their creativity, sense of ownership and enjoyment in writing, which leads to strong demotivation among students in EFL settings. It is obvious that the current writing instruction may focus too much on test preparation at the expense of fostering learners' active role in learning to write. Given the above problems, it is incumbent on researchers and practitioners to explore how to improve students' motivation and develop them into active learners who are learning to write in L2 settings.

Informed by the successful achievement of process-oriented writing instruction in Western writing pedagogies, some of the recommendations for improving writing have included teaching explicit strategies for writing particular genres (see Plonsky, 2011, for a review). Under these circumstances, many EFL practitioners and researchers are committed to transferring L1 writing theories and pedagogies (such as the process approach and the genre approach) initiated in Western writing pedagogies to Chinese contexts (e.g., Deng, Chen, & Zhang, 2014). During the past two decades, research on explicit writing instruction with a focus on process writing and strategies has gained popularity in Chinese tertiary classrooms. Such a pedagogical endeavour to integrate different learning strategies into writing processes reflects a change of writing instructional focus from texts to writers (Teng, 2016; Zhan, 2012).

In spite of the change in writing theory and pedagogy in the past two decades, product-oriented approaches still dominate college EFL writing instruction (You, 2004; Zhan, 2012). Some researchers have posited that, despite scholars' interest in examining EFL writing strategies as cognitive constructs, writing strategies are not integrated into the curriculum and instructional practices at the university level (Zhang, 2010). Although some studies have explored different writing strategies used by Chinese students (Lei, 2008; X. Gao, 2007), scholars have conducted intensively empirical observation or strategies-based instruction with a focus on cognitive and/or metacognitive strategies, without investigating the multi-faceted structure of writing strategies from an SRL framework. Such a gap calls for a need to develop a wide range of SRL strategies through explicit strategy instruction and with a sound theoretical framework of SRL to foster more active and efficient writers.

1.4 Statement of Problems

The above literature review highlights the following gaps with little research on:

- 1) Investigating SRL strategies in L2 writing settings, especially as regards EFL writing from a multiple framework of SRL theory that includes cognition, metacognition, social behaviour and motivational regulation;
- 2) Exploring how learners' psychological variables (motivational beliefs and self-efficacy) affect SRL strategies and writing performance in L2 contexts;
- 3) Integrating SRL theory into explicit strategies-based writing instruction to foster active and strategic L2 writers.

1.5 Objectives and Research Questions

Informed by sociocognitive theory and sociocultural theory, this study aimed to explore how self-regulation theory contributes to EFL learners' writing performance from the perspectives of SRL strategies, motivational beliefs and self-efficacy. The reconciliation of the two theoretical paradigms is expected to provide a better understanding of the SRL process under the influence of the self, affect, social and environmental contexts in EFL writing.

The purpose of the current study is threefold. The preparatory stage aimed to validate quantitative instruments used for the main study. Informed by SRL theory (Zimmerman & Martinez-Pons, 1986), this stage initially developed and validated the *Writing Strategies for Self-regulated Learning Questionnaire (WSSRLQ)* to evaluate students' reported use of SRL strategies in EFL writing. The WSSRLQ was designed to include multi-dimensional constructs of SRL strategies in light of cognition, metacognition, social behaviour and motivational regulation. In addition, another new questionnaire, *Second-Language Writer Self-efficacy Scale (L2WSS)* was developed to examine the underlying factors of writing self-efficacy from the perspective of linguistics, performance and self-regulation in L2 contexts. All the questionnaires used for the main study were validated through factor analysis in this stage.

Phase One of the main study aimed to examine the current situation of students' reported use of SRL strategies and their perceived motivational beliefs and self-efficacy and to explore how these factors relate to writing performance. Data were collected from self-reported questionnaires and a writing test with an aim to address one overarching research question:

What was the situation of SRL strategies, motivational beliefs and self-efficacy reported by university undergraduate students in EFL writing?

The specific research questions are as follows:

- 1) Did EFL students in China report any differences in using SRL strategies across year levels?
- 2) Were there any differences between high writing-proficiency students and low writing-proficiency students in terms of the self-reported SRL strategies and the perceived motivational beliefs and self-efficacy?
- 3) How did the self-reported SRL strategies correlate with the perceived motivational beliefs and self-efficacy in EFL writing?
- 4) What were the predictive relationships of the self-reported SRL strategies and the perceived motivational beliefs and self-efficacy with writing test scores?

Phase Two of the main study aimed to explore how self-regulated strategy writing instruction, framed within SRL models, affected students' writing performance, their reported use of SRL strategies and perceived motivational beliefs and self-efficacy. A quasi-experimental research design was carried out. Quantitative data collected from questionnaires and writing tests addressed an overarching question:

Did self-regulated strategies-based writing instruction have any impact on the experimental group in terms of writing test scores, the self-reported SRL strategies and the perceived motivational beliefs and self-efficacy? And if yes, how did the experimental group and the control group differ after the intervention ended?

The specific questions are as follows:

- 1) How did the experimental group and the control group differ in writing test scores at the post-test and the delayed post-test?
- 2) How did participants from the two groups differ in their reported use of SRL strategies at the post-test?
- 3) How did participants from the two groups differ in their perceived motivational beliefs and self-efficacy at the post-test?

In this phase, two students from the experimental group were invited to attend a follow-up case study to provide in-depth information about how strategies-based writing intervention affected the two students' perceived motivational beliefs and self-efficacy; their views of regular writing courses and the intervention; their understanding of what makes a good writer; and the use of SRL strategies in EFL settings. Data were collected from semi-structured interviews and writing journals. These qualitative data were used to address the following three questions:

- 1) How did the self-regulated strategies-based writing instruction influence the two students' motivational beliefs and self-efficacy?
- 2) How did the two EFL students view the regular writing teaching and the intervention?
- 3) How did the self-regulated strategies-based writing instruction influence the two students' view of what makes a good writer and the utility of writing strategies?

1.6 Significance of the Research

Theoretically, this study aims to enrich our understanding of second language acquisition in general, and second language writing in particular, by applying SRL theory, which originates from educational psychology. It is also anticipated that evaluating strategies-based writing instruction based on self-regulation theory could contribute to rejuvenating the language learning strategy (LLS) (Tseng, Dörnyei, & Schmitt, 2006). In addition, this study is expected to provide a more comprehensive understanding of how personal, behavioural, environmental and psychological factors impact learners' self-regulating process and their writing performance within an EFL context.

Pedagogically, the study is expected to offer implications for EFL writing instruction, with a view to cultivating learner autonomy and lifelong learning. The present study aims to broaden our insights into the feasibility and effectiveness of SRL strategies-based instruction, for Chinese EFL learners. Given the dominant position of product-oriented writing instruction in China, findings of this study could provide empirical information on how to integrate strategy instruction in a regular writing curriculum. The self-regulated strategies-based writing instruction is expected to raise students' awareness of why and how to use different SRL strategies effectively. In addition, the inclusion of an investigation of psychological factors such as motivational beliefs and self-efficacy into SRL models may provide greater insight into learners' writing development in an EFL context. The outcomes of this study may contribute to innovations in teachers' writing syllabus and lesson design using SRL strategies for effective learning.

1.7 Organisation of the Thesis

This thesis is composed of ten chapters. Chapter One provide a holistic view of the research regarding rationale, existing problems, research purpose and questions, as well as the significance of the research. Chapters Two and Three provide a systematic literature review on SRL, LLSs, writing strategies and L2 writing research with a particular emphasis on EFL writing in China. Chapter Four constructs a sound theoretical framework of SRL from sociocognitive and sociocultural theories with an aim to understand the nature of writing through multidimensional lenses. Chapters Five and Six present an explicit description of the research design and the instrument development and validation process. Chapter Seven reports findings and discusses the current situation of students' reported use of SRL strategies and their perceived motivational beliefs and self-efficacy. The relationships of these variables with students' writing test scores are also demonstrated in this chapter. Chapter Eight presents the findings and discussion of the fourth-month self-regulated strategies-based writing instruction. Chapter Nine focuses on the results of a case study with a thorough discussion of the developmental trajectory of the two cases. Chapter Ten endeavours to summarise research findings as a whole, while pointing out the theoretical and pedagogical implications. Limitations and suggestions for future research are also discussed in this chapter.

CHAPTER TWO

LITERATURE REVIEW – PART ONE

This chapter provides an overview of research on SRL strategies and language learning strategies (LLSs) with an aim to present the rationale of incorporating SRL theory into LLSs. Then proceeding sections present a summary of popular measurements used to investigate learning strategies in both L1 and L2 settings.

2.1 Research on SRL strategies

SRL theory originated from educational psychology in the 1970s, with exponential development in the past four decades. SRL refers to the degree to which individuals are active participants in their own learning; it is a more dynamic concept than learning strategy, highlighting the learner's own strategic efforts to manage their own achievement through specific beliefs and processes (Zimmerman & Risemberg, 1997). SRL is not a static trait but “an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features in the environment” (Pintrich, 2000, p. 453). There has been an agreement that SRL involves a range of behaviours to control learning processes, which include

setting goals for learning, attending to and concentrating on instruction, using effective strategies to organize, code, and rehearse information to be remembered, establishing a productive work environment, using resources effectively, monitoring performance, managing time effectively, seeking assistance when needed, holding positive beliefs about one's capabilities, the value of learning, the factors influencing learning, and anticipated outcomes of actions, and experiencing pride and satisfaction with one's efforts. (Schunk & Ertmer, 2000, p. 631)

It is clear that SRL processes require learners' effective deployment of a range of strategies to help them intentionally activate, sustain and adjust cognitions, affects and behaviours to achieve their learning goals (Zimmerman & Schunk, 2011). SRL

strategies focus on “students’ proactive use of specific processes or responses to improve their academic achievement” (Zimmerman, 2008, p. 167). Many researchers have acknowledged that SRL strategies embrace a multi-faceted structure including cognition, metacognition, social behaviour and motivational regulation (Zimmerman, 2011). In the learning process, learners deploy different dimensions of SRL strategies to help them actively control their internal mental states, beliefs, observable behaviours, and the learning environment in the learning process (Zimmerman, 2013).

During the past three decades, extensive research on SRL strategies has been conducted to improve students’ academic achievement and foster their learning capacity. Initial attempts were also made to classify the use of SRL strategies in general learning contexts and explore how learners’ proficiency level influenced their use of these strategies. Enlightened by Bandura (1986), Zimmerman and Martinez-Pons (1986), for example, endeavoured to solicit different categories of SRL strategies by using semi-structured interviews, the *Self-Regulated Learning Interview Scale (SRLIS)*. They collected data from both the high achievement and the low achievement students in elementary and secondary schools in America. Findings revealed 14 categories of SRL strategies in the contexts of class, homework and self-study, suggesting the reliability of the *SRLIS* for describing students’ use of SRL strategies in naturalistic settings. In addition, the 14 SRL strategies they had elicited (i.e., self-evaluation; organisation and transformation; goal setting and planning; information seeking; record keeping; self-monitoring; environmental structuring; giving self-consequences; rehearsing and memorising; seeking social assistance; and reviewing) were successful in demonstrating significant predictions of students’ academic outcomes. Zimmerman and Martinez-Pons (1988) later conducted structured interviews with tenth-grade students and completed a teacher scale to measure SRL strategies observed in the classroom. Their research revealed that the number of strategies used by these students had a positive correlation with their academic achievement.

Spearheaded by Zimmerman and his colleagues’ research (1986; 1988), Pape and Wang (2003) first extended the 14 SRL strategies with more specific subcategories. For example, they included seeking social assistance from peers, teachers and adults as well as reviewing records from tests, notes and text as a new category of SRL strategies. They also further divided environmental strategies into physical environmental

structuring and attention control. After analysing the protocol of middle school students in mathematics and reading contexts, Pape and Wang found that high academic achievers utilised a wider range of learning strategies than their low academic counterparts. They also reported a significant correlation between SRL strategies and academic attainment in the two subjects. Recent research has shifted the focus from SRL strategies to self-regulatory capacity. Tseng et al. (2006) devised the *Self-regulation Capacity in Vocabulary Learning's Scale* to assess the capacity of strategic learning. The research found that effective learners were more flexible with a repertoire of strategies and more effective at monitoring and adapting their use of strategies, while less effective learners were more likely to overuse ineffective strategies. In addition, more effective learners tended to focus on the task as a whole whereas the less effective learners were inclined to focus on details.

The second strand of SRL research emphasises individual differences in learners' use of learning strategies and how motivational and social factors influence the use of SRL strategies, such as goals (Schunk & Ertmer, 2000; Zimmerman, Bandura, & Martinez-Pons, 1992), attributions (Shell, Colvin, & Bruning, 1995), self-efficacy (Caprara et al., 2008; Zimmerman & Bandura, 1994), emotions (Mason, Shriner, Shriner, & Shriner, 2008; McCann & Garcia, 1999). According to Pintrich (2004), motivation is one of the key factors influencing performance and learning outcomes throughout SRL processes (Pintrich, 2004). Motivational processes play a vital role in "initiating, guiding, and sustaining student effort to self-regulate their learning" (Zimmerman & Schunk, 2008, p. 3). Previous research has found that highly motivated students outperformed poorly motivated students in terms of being attentive to learning processes and outcomes, making progress when completing a task, exerting more effort to learn and obtaining more satisfaction (Dörnyei, 2005; Schunk, Pintrich, & Meece, 2008; Zimmerman, 2011). Zimmerman and Bandura (1994) claimed that self-efficacy was also one of the key determinants governing the regulation of motivation and learning achievement. Schunk and Ertmer (2000) found that students with high self-efficacy tended to actively engage in learning activities with longer persistence and effectively deploy a range of SRL strategies, which in turn led to positive academic performance. These positive effects of self-efficacy on self-regulation and academic performance have been corroborated by other empirical studies (e.g., Caprara et al., 2008; Chemers et al., 2001;

Zimmerman & Bandura, 1994). In particular, Caprara et al. (2008) conducted a ten-year longitudinal study, which revealed the developmental course of perceived self-efficacy in SRL and its contribution to academic achievement across different year levels, from junior to high school.

To date, research on SRL strategies has evolved to be multi-faceted, incorporating metacognition, psychological variables and social environments in general or specific contexts. Although theoretical understanding of SRL posited the triadic influence of metacognition, behaviour and motivation for effective learning, so far, much of the research in this field has intensively focused on exploring cognitive and metacognitive strategies in various disciplines such as L1 reading and writing, educational psychology, math, music and sports (Zimmerman & Schunk, 2011). However, the regulation of motivation as an integrative component of SRL is insufficiently investigated. Despite progress in the field of general education, there is a need to explore SRL from a multi-dimensional perspective to promote student learning achievement with specific reference to EFL writing, an area which has been under-explored, both theoretically and empirically.

Therefore, this study proposed a multifaceted portrayal of SRL strategies that included cognition, metacognition, social behaviour and motivational regulation, which are essential to fostering self-regulated learners (Pintrich, 2004; Zimmerman & Risemberg, 1997). Informed by this multidimensional model, this study aimed to foster self-regulated writers from the perspectives of SRL strategies, motivational beliefs and self-efficacy, thereby maximising the writing outcomes in EFL contexts.

2.1.1 Motivational regulation strategies in SRL

Although a plethora of research has confirmed the essential role of different learning strategies in general learning contexts, most of studies have intensively explored cognitive and/or metacognitive strategies with sparse attention to motivational regulation strategies. As Dörnyei (2005) argued, the purpose of motivational strategies is “to generate and enhance student motivation, as well as maintain ongoing motivated behaviour and protect it from distracting and/or completing action tendencies” (p. 117). Having acknowledged the essential role of motivational regulation, some researchers

are committed to examining students' use of motivational regulation strategies with fruitful results (see Wolters & Benzoni, 2013, for a review). They collectively have demonstrated that motivational regulation strategies contribute to students' learning and achievement in academic settings (Cooper & Corpus, 2009; Pintrich & De Groot, 1990; Schwinger, Steinmayr, & Spinath, 2009; Wolters, 1998). This line of research has provided preliminary evidence that students' motivational regulation strategies could be utilised to predict their use of learning strategies, efforts and classroom performance (Wolters, 1998, 1999). For example, as a pioneer researcher, Wolters (1998) focused on describing different motivational regulation strategies by using a self-designed questionnaire. He collected data from 115 university students who were enrolled in an introductory psychology course. Findings showed that students who reported using intrinsic forms of motivational regulation (e.g., mastery self-talk, interest enhancement) tended to report greater use of strategies of elaboration, critical thinking, and metacognition. He also found that only performance self-talk as a form of extrinsic motivational regulation significantly predicted students' course scores. Later, Wolters (1999) extended his research to young adolescents of ninth- and tenth-grades and proposed a five-factor taxonomy of motivational regulation strategies: interest enhancement, performance self-talk, self-consequating, mastery self-talk, and environment control. His findings showed that the five motivational regulation strategies as a whole had a significant effect on classroom performance.

Some researchers either explored motivational regulation strategies such as volitional control (e.g., emotional control) and interest enhancement, or extended the categories of motivational regulation strategies in different learning environments. For instance, McCann and Garcia (1999) found that volitional control (e.g., emotion control) was a significant predictor of some learning strategies including rehearsal, elaboration, organisation, critical thinking, metacognition, time management, peer learning and help-seeking while not predicting the course grade. Sansone and his colleagues (1999) focused on interest enhancement strategies used by university students. They found that students who used different strategies for making a task more interesting tended to persist longer than those who did not use those strategies. Schwinger, Steinmayr and Spinath (2009) modified Wolter's questionnaire in German contexts and their data revealed an indirect relationship between motivational regulation strategies and students'

academic performance, which was mediated by students' learning effort. They also found that motivational regulation strategies were positively correlated to students' current learning effort, which in turn was associated with better exam scores.

Although limited in scope, these findings collectively support a view that motivational regulation is closely tied to students actively monitoring and regulating their willingness to expend efforts or persistence on academic tasks in general educational environments. However, research on students' motivational regulation strategies is still in its early stage. There are no consistent findings in terms of how motivational regulation strategies are related to other learning strategies and students' academic performance. It is unclear whether the above findings are to be extrapolated in a Chinese context where students learn to write in EFL. It is vague too, in such a context, as to how motivational regulation influences students' academic performance, given that L2 writing is under the influence of social factors, behaviour and environments (Silva & Matsuda, 2010).

2.2 Language Learning Strategies (LLSs)

When it comes to SRL strategies that students use in learning a second or foreign language, it is important to refer to the already well-developed field of LLS research. Emanating from the seminal work of Rubin (1975), studies on language learning strategies have experienced flourishing development during the past three decades. A rich body of literature has underlined the important relationship between LLSs and students' academic achievement (e.g., A. Cohen, 1998; A. Cohen & Macaro, 2007; O'Malley & Chamot, 1990; Zhang, 2003). Some research has focused on the difference regarding the use of learning strategies by successful and less successful language learners in different learning contexts (A. Cohen & Macaro, 2007; Gu, 2010; Oxford, 1990). They found that successful language learners exhibited strategic behaviours that distinguished them from less successful ones in metacognitive, cognitive and socio-affective strategies. Others explored the strategies-based instruction (SBI) aiming to arouse the awareness of learning strategies, foster effective use of learning strategies and transfer the strategies to new language learning and using contexts (Chamot & El-Dinary, 1999; De Silva & Graham, 2015; Gu, Hu, Zhang, & Bai, 2011; O'Malley & Chamot, 1990; Zhang, Gu, & Hu, 2008).

2.2.1 Problems of LLSs

Although a range of studies in the past three decades has explored language learning strategies, observational and instructional research on LLSs has been plagued by a barrage of criticisms, including definitional fuzziness, contentious taxonomies, insufficient theorising and lack of a psychometrically-sound instrument for measuring LLSs (Dörnyei, 2005; Ellis, 1994; Tseng, Dörnyei, & Schmitt, 2006; Woodrow, 2005).

The definition of language learning strategies has been contentious for a while now. The diverse conceptualisation of learning strategies triggered a robust debate on “whether learning strategies should be regarded as either observable behaviours or inner mental operations, or both” (Tseng et al., 2006, p. 80). Oxford (1989) claimed that “language learning strategies are behaviours or actions which learners use to make language learning more successful, self-directed and enjoyable” (p. 235). She regarded learning strategies as observable behaviours. However, O’Malley and Chamot (1990) argued that LLS strategies could be regarded as “special thoughts or behaviours that individuals use to help comprehend learn or retain new information” with both behavioural and mental characteristics” (p. 1). This definition implies that some strategies cannot be observed directly due to the nature of strategies being essentially mental processes. Later, Oxford (1990) contended that “language learning strategies are steps taken by students to enhance their own learning” (p. 1). This definition seemed to alleviate a serious debate on whether strategies are mental or behavioural because “steps” can be both mental processes and behaviours. However, it triggered more debate on terminology used to distinguish “strategies”, “techniques”, “actions” and “steps”. According to Schmeck (1988), strategy relates to a cluster of higher level learning tactics and the choice of tactics by a student are guided by his or her strategy, and the learning outcome is also determined by this choice. Ellis (1994) criticised the definition of learning strategies as “ad hoc” and often conflated with other terms, such as skills, tactics, techniques and moves (Macaro, 2006; Tseng et al., 2006). The diverse conceptualisation of learning strategies also triggered a robust debate on “whether learning strategies should be regarded as either observable behaviours or inner mental operations, or both” (Tseng et al., 2006, p. 80). The definitional fuzziness undermined the theoretical framework of LLS research and it also caused another argument focusing on whether the deployment of LLS strategies was intentional or subconscious in

learning processes (Dörnyei, 2005; Rose, 2011; Woodrow, 2005). Cohen (2007) defined a learning strategy as a conscious mental activity, entailing three key elements: a goal or intention, an action to reach this goal and a learning activity. Recently, Oxford (2011) proposed a more inclusive definition of learning strategies as “deliberate, goal-directed attempts to manage and control efforts to learn” with teachable and changeable characteristics (p. 12). Griffiths (2008) argued for the essential role of having a clear definition of the construct and she proposed a simple definition of language learning strategies as “activities consciously chosen by learners for the purpose of regulating their own language learning” (p. 87). Up to now, the agreed definition of learning strategies has been “the learners’ consciously chosen tools for active, self-regulated improvement of language learning” (Oxford et al., 2014, p. 30). Some agreements have been made in terms of defining learning strategies as goal-oriented and conscious control of learning efforts. In addition, some researchers have acknowledged the necessity of defining learning strategies in terms of specific behaviours and contexts in order to make LLSs teachable and replicable (A. Cohen, 2014; Gu et al., 2011; Oxford et al., 2014; Zhang, 2003).

Another argument focuses on the taxonomy of language learning strategies, with the two most popular taxonomies proposed by O’Malley and Chamot (1990) and Oxford (1990). O’Malley and Chamot (1990) divided learning strategies into cognitive strategies, metacognitive strategies and socio-affective strategies. This classification emphasised the essential role of metacognitive strategies in the self-reflecting learning process. Oxford (1990) applied the hierarchical distinction of direct and indirect strategies with several substrategies belonging to each category. The direct approach referred to learning strategies that were directly involved in language learning. This form of strategies embraced memory strategies, cognitive strategies and compensation strategies. Indirect approach was used to facilitate and support language learning indirectly. This form included meta-cognitive strategies, affective strategies and social strategies. However, there has been critique of the above classifications. Griffiths (2008, 2013) argued for eliminating the *priori* strategy classification or avoiding grouping strategies according to post hoc thematic analysis, indicating the necessity to establish a context or task specific classification of learning strategies.

Cohen (2014) pointed out that there were no clear-cut distinctions in terms of classifying strategies because learners are “at choice in determining the function of strategies based on their purpose in a given task or at a certain moment” (p. 18). Therefore, he proposed a triadic way to classify learner strategies by goal for using (e.g., identifying, distinguishing, grouping and memorising strategies); learning (e.g., retrieval, rehearsal and communicative strategies); and function (e.g., cognitive, metacognitive, affective and social strategies) and skill (A. Cohen, 2008b, 2014). This triadic classification reflects the complex features of learning strategies as goal-directed activities, which provides a feasible, situated and operative classification of learning strategies.

Some researchers (Dörnyei, 2005; Rose, 2011, 2012; Woodrow, 2005) have argued that psychometric properties of LLS instruments are not guaranteed given that the Likert scale is an inappropriate and less reliable method to investigate strategies, calling for “a more situated approach utilising in-depth qualitative methods” (Woodrow, 2005, p. 90). As Ellis (2008) argued, “the problem of measurement...adds to the confusion over what exactly constitutes a learning strategy” (p. 719). According to Rose (2012), measuring quantitative data of strategy use by frequency did not have psychometrically justifiable results because of “scale items not being in a linear relationship [and] meaning response cannot be converted into numerical forms” (p. 139). Woodrow’s (2005) research revealed that “a standard Likert-type scale is not appropriate because of the wide range of possible contextual influences, such as cultural and educational background” so it was impossible to “generalize across samples” (p. 96). She (2005) questioned the generalisation of an overall mean scale without any reference to scale of subcategories, therefore calling for a reduction in the number of categories to cognitive, metacognitive and resource management. Woodrow hoped to arouse “an urgent need to reconceptualise LLSs in a way that can accommodate variation in language learning settings and address cross-cultural differences of studies” (2005, p. 90).

Given the inconsistency of classifying learning strategies, a context-specific approach is recommended, thereby avoiding quibbles around taxonomies of general strategies and unfolding debate about classification of LLSs. This suggestion is warranted by some studies (e.g., Rose, 2012; White, Schramm, & Chamot, 2007; Woodrow, 2005). Rose claimed that “research frameworks [needed] to be context-specific rather than

generalised across languages and learning tasks” (p. 137). Woodrow (2005) argued that “what is required is an analysis of the effective strategy use in given contexts” (p. 97). This context-specific solution resonated with Cohen’s (1998) study, claiming “a continuum from the broadest to the most specific”, which can make the operationalisation of the definition much easier (p. 10). In addition, some researchers also argued for including mixed-methods research to solicit the use of learning strategies. As Woodrow (2005) posited, a single instrument “could not possibly be applicable and useful to all possible groups of language learners” so the generalisation of results can be achieved by “using more qualitative methods such as case studies and, particularly, action research” (p. 96). She proposed that “a more situated approach utilizing in-depth qualitative methods would be more appropriate in assessing LLS use” (Woodrow, 2005, p. 90). This argument was supported by Rose (2012) and White et al. (2007), affirming the benefits of qualitative research and analysis in the form of interview, stimulated-recall and questionnaires on strategy use to elicit far richer and more accurate data.

Another critique focuses on the lack of “an adequate theory of strategic behaviour to which all results can be related” (McDonough, 1999, p. 13), which calls for more “theoretical research to develop precision in our conception of strategies” (p. 14). Tseng et al. (2006) argued that “the majority of LLS research has been interested in more practical goals, i.e., to explore ways of empowering language learners to be more effective in learning”, rather than “pushing the theoretical understanding of language learning strategies forward” (p. 78). The lack of “any theoretical account of how learning strategies relate to the psycholinguistic processes involved in L2 acquisition” hampered the further development of language learning strategies (Ellis, 2008, p. 719). It therefore called for more theoretically-driven research in LLS. These criticisms may have given emerging researchers a false impression that LLS research has come to an end. Some scholars (e.g., A. Cohen & Macaro, 2007; X. Gao, 2007; Rose, 2011) counter-argued, stating that LLSs have actually not been well researched due to some researchers’ over-generalisation of LLS use. They therefore recommended examining LLS use in specific skill areas (e.g., listening, reading, vocabulary or writing). The contextualised approach to LLS research has, to a great extent, found a solution to the

issue of quibbles around taxonomy and made the operationalisation of the definition much easier (A. Cohen & Macaro, 2007; Macaro, 2006; Woodrow, 2005).

2.2.2 LLSs and SRL

Such criticisms would seem to indicate that LLS research has run its course. However, researchers have recently called for a more differentiated analysis and evaluation of LLS research (e.g., Cohen & Griffiths, 2015; Zhang, 2010). It is worth recalling that O'Malley and Chamot (1990) derived their process-oriented theoretical understanding of LLSs from John R. Anderson's (1983, 1985) well established principles for the adaptive control of thought (ACT)*. While their approach to LLSs is well aligned with understandings about learning strategies in both general and educational psychology, it may have overextended itself by lumping together all strategies to cover all language skill areas, thereby setting up numerous definitional hurdles. Just as problematic is the fact that, as Cohen and Macaro (2007), Gao (2007), and Rose (2011), among others, have pointed out, LLSs have actually not been well researched, leading to inappropriate over-generalizations regarding their use. Indeed, by examining LLS use with reference to specific skill areas (e.g., listening, reading, vocabulary, or writing), it has been possible to address the critiques criticisms of a strategy taxonomies and to begin to operationalize strategy use more firmly (Cohen & Macaro, 2007; Macaro, 2006; Woodrow, 2005).

In an additional step, Dörnyei and associates (e.g., Dörnyei, 2005; Tseng et al., 2006) have suggested rejuvenating LLS research in terms of a self-regulation mechanism, which conceptualizes learning strategies from the perspective of students' capacity to manage their own learning. In fact, some researchers (e.g., Cumming, Busch, & Zhou, 2002) have proposed that enhancing learners' self-regulatory capacity with a goal orientation is the central tenet of the SRL process. Their proposal has helped L2 scholars reorient LLSs as goal-directed activities in relation to specific L2 contexts. Such a perspective enables LLSs to be further explored within the framework of SRL, which is interpreted as “an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate and control their cognition, motivation and behavior, guided and constrained by their goals and the contextual features in the environment” (Pintrich, 2000, p. 453).

An SRL perspective would be especially conducive to promoting active and productive learning in specific L2 language skill areas and learning contexts. Tseng et al. (2006), for example, devised the Self-regulation Capacity in Vocabulary Learning's Scale to assess the capacity of strategic learning within an SRL framework. Confirmatory factor analysis validated a five-factor model that included commitment control, emotional control, metacognitive control, satiation control, and environment control. Subsequent exploratory factor analysis revealed the unidimensionality of the five indicators in the instrument with satisfactory psychometric properties. Their findings provided support for the appropriateness of using the construct of self-regulation in the specific case of vocabulary learning.

Encouraging as those findings are, what remains to be accounted for is the multidimensionality of the SRL construct, which also includes metacognition, as Gao (2007) and Zhang (2010) have argued, and its use in different educational contexts. For example, Zhang, Gu, and Hu's (2008) investigation of SRL strategies by Singaporean primary school students in a bilingual/biliteracy learning context showed a significant relationship between students' use of SRL strategies and their language proficiency. However, their study only reported cognitive strategies in bilingual reading contexts without reference to the interplay of other SRL dimensions, such as metacognition, motivation, and social behavior.

Based on this research evidence, this study postulates that what stands out as a strength of SRL is that, like LLS research, it places heavy emphasis on the learning process and learners' pivotal role in it. In addition, both SRL and LLS are overarching terms that include cognitive, metacognitive, social-behavioral, and motivational components. This makes it possible to incorporate the control mechanism of cognition, behavior, environment, and motivation and to begin to explore various dimensions of learners' development of SRL capacity, such as motivational regulation and social behavior in specific contexts, here L2 writing. This study therefore suggests that L2 writing as a process be usefully examined from a multidimensional perspective that includes an understanding of how learners set goals, attempt to monitor, regulate, and control their cognition, motivation, and behavior in the learning process, and considers how these

aspects, in turn, are often guided and constrained by learners' goals and diverse contextual features.

2.3 Instruments for Evaluating LLSs and SRL strategies

The assessment of learning strategies has given priority to the use of the self-report questionnaire. As advocated by Petrić and Czár (2003), the self-report questionnaire is useful to provide more holistic and large-scale information for researchers to depict the pattern of strategy use in a specific learning context. On the one hand, large-scale questionnaires enable the use of quantitative methodologies as a way of developing a model for understanding how writing strategies interact with other factors such as social and psychological variables in L2 contexts (Hsiao & Oxford, 2002; Petrić & Czár, 2003; Zhang et al., 2016). On the other hand, as O'Malley and Chamot (1990) pointed out, questionnaires are a useful method for soliciting individual perceptions and interpretations of students' own learning experience that can provide explanation for behavior (e.g., trait-like features).

Three questionnaires developed to evaluate LLSs in L2 settings and SRL strategies in general learning contexts stand out: The Strategy Inventory of Language Learning (SILL) (Oxford, 1990); the Learning and Study Strategies Inventory (LASSI) (Weinstein et al., 1987); and the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al., 1991).

The first, The Strategy Inventory for Language Learning (SILL) (Oxford, 1990), has been widely used to investigate learning strategies in L2 contexts. The SILL is a 5-point scale questionnaire ranging from 1 (never use it) to 5 (often use it). The instrument has been used to address specific strategic behaviour, including six types of strategy taxonomy in: (a) memory strategies, (b) cognitive strategies, (c) compensation strategies, (d) metacognitive strategies, (e) affective strategies, and (f) social strategies. Some researchers have developed their versions of inventories based on the SILL to investigate writing strategies (e.g., Petrić & Czár, 2003). Although this instrument has been extensively used in various contexts, especially in general language learning environments, it is not above criticism. As Tseng et al. (2006) argued, the scales of specific strategies in the SILL are not cumulative, which makes it impossible to

“assume a linear relationship between individual item scores and the total item scores” (p. 83). That shortcoming has marred the application of the SILL to specific contexts with robust psychometric properties.

The second instrument, the Learning and Study Strategies Inventory (LASSI), was developed by Weinstein and his colleagues (1987) as a diagnostic and prescriptive instrument within SRL theory to evaluate students’ awareness about and use of learning strategies in terms of skill, will and self-regulation. This is an 80-item self-report inventory with a 5-point scale ranging from 1 (not at all typical of me) to 5 (very much typical of me). Of the 10 scale strategies, the Skill categories include concentration, selecting main ideas and information processing; the Will categories entailed motivation, attitudes and anxiety; the Self-regulation categories comprise time management, study aids, self-testing and test strategies. Coefficient alphas of the 10 scale strategies range from .76 to .87. The internal correlations between these scales range from .13 (between information process and anxiety) to .59 (between time management and motivation), revealing the discriminant validity of the measurement.

Pintrich et al. (1991) developed a self-report instrument, the Motivated Strategies for Learning Questionnaire (MSLQ), with 7-point Likert scales ranging from 1 (not at all true of me) to 7 (very true of me). The MSLQ was designed to evaluate two distinct constructs: motivation (31 items) and learning strategies (50 items) of college students in classroom environments. The motivational scales entailed the assessment of what Pintrich et al. refer to as students’ value (extrinsic and intrinsic goal orientation and task value), expectancy (control belief and self-efficacy) and affect (test anxiety); the learning strategy scales included students’ use of cognitive strategies (rehearsal, elaboration, organization, and critical thinking), metacognitive strategies (planning, monitoring, and regulating strategies) and resource management (effort management, time and environment management, and help-seeking). The motivation and learning strategy sections correspond to the three elements in the definition of SRL: motivation, metacognition, and behaviour. The instrument is intended as a coherent conceptual and empirically validated framework in which the 15 different subscales on the MSLQ could be utilized together or singly by taking the mean of the items corresponding to each factor. The MSLQ has undergone extensive psychometric development and the overall internal consistency reliability (Cronbach alphas) was found to be adequate for a

motivation scale ($\alpha = .78$) and a learning strategy scale ($\alpha = .71$) respectively. However, confirmatory factor analysis did not generate satisfactory goodness-of-fit indices for the motivation sections (GFI = .77; AGFI = .73; RMR = .07), or for the learning strategy subscales (GFI = .78; AGFI = .75; RMR = .08) (Pintrich et al., 1991). The goodness-of-fit indices were lower than the recommended benchmark values (Benlter, 1999), indicating that the MSLQ's construct validity might not be reliable enough, particularly if it is applied in other learning contexts.

Findings from these instruments clearly support utilising questionnaires to evaluate learning strategies. Also, the popularity of the MSLQ and the LASSI produced clear evidence that SRL was an important construct that merits further research. However, the utility of these instruments has been subject to criticism. As noted earlier, critics initially argued against the broad-brush investigation of general learning strategies, which intrinsically marred the conceptual framework and classification of these instruments. In addition, contextual and cultural differences have not been fully considered and explored. For example, the LASSI and the MSLQ inventories were widely applied in educational contexts, such as sport, music, L1 reading and writing without sufficient empirical validity in L2 specific contexts. The SILL was weak at the psychometric properties by using frequency scales in general L2 learning settings.

In sum, how to evaluate writing strategies for SRL in EFL settings is far from resolved and needs to be addressed in relation to specific learning contexts. Specifically, instruments that were initially developed for L1 or L2 learners in general learning contexts cannot be directly applied to EFL writing contexts, nor can their data be treated as reliable for providing insights into specific writing issues. Such a lacuna in the research literature calls for the development of a theoretically more robust instrument with strong psychometric properties to evaluate the use of writing strategies for SRL in EFL environments.

CHAPTER THREE

LITERATURE REVIEW – PART TWO

This chapter initially presents an overview of research on SRL strategies in L1 writing. Then the subsequent sections offer a thorough description of empirical studies on L2 writing strategies regarding the definition, classification, evaluation and strategies-based writing instruction. The ensuing sections summarise research achievement on EFL writing strategies in China, followed by a description of how motivational beliefs and self-efficacy impact the use of writing strategies and academic outcomes.

3.1 SRL Strategies in L1 Writing Contexts

Writing is regarded as the most complex and uncontrollable task in developing language proficiency, in both an L1 and an L2, due to its “recursive, strategic, and multi-dimensional” characteristics (Harris et al., 2011, p. 188). It has been acknowledged that the composing process not only requires writing knowledge and the regulation of behaviours, but also the deployment of strategies under the influence of multiple factors (Graham & Harris, 2005). Hammann (2005) elucidated that SRL strategies were helpful to “support learning and cognitive development, assess knowledge acquisition, and stimulate creativity” in the writing process (p. 17).

The magnitude of SRL strategies that contribute to the enhancement of writing achievement has attracted the most attention in L1 contexts, both descriptive and instructional. For example, Zimmerman and Risemberg (1997) compared the differences in strategy use among expert and novice writers and found that expert writers used a variety of SRL strategies, whereas novice writers often underestimated the role of some strategies such as planning and revising. They also stressed the interdependence of processes and the dominant influence of self-efficacy on SRL strategies, intrinsic motivation, deployment of writing processes and literacy achievement. Zimmerman and Kitsantas (1999) posited the important function of the self-regulation process and the use of learning approaches (deep and surface). They found that the participants who shifted in their writing revision activity from process to outcome goals performed better in writing revision skill, self-reactions, self-efficacy

perceptions and intrinsic interest than the participants who focused on outcome goals. This revealed that individuals who started with an effective process might reach a better outcome. Recent research conducted by Harris and his colleagues (2011) found that skilled writers had more engagement in writing processes and showed themselves to be more active in SRL processes. They also found that “writing is flexible, goal-directed activity that is scaffolded by a rich knowledge of cognitive processes and strategies for planning, text production and revision” (p. 189).

Another development in SRL research focuses on examining the effects of strategy-based instruction, which has been widely applied in L1 writing with fruitful achievements (e.g., Fidalgo, Torrance, & García, 2008; Graham & Harris, 1996; Harris, Santangelo, & Graham, 2010). Some scholars (Dignath, Buettner, & Langfeldt, 2008; Graham & Perin, 2007; Plonsky, 2011) conducted meta-analysis research to evaluate the effects of strategy instruction and found the moderate effect on learners’ writing performance in L1 setting. For instance, Dignath et al. (2008) reviewed 30 research papers on enhancing self-regulated learning amongst primary school students from 1992 to 2006 and found a strong correlation between the instruction of writing strategies and writing proficiency (the effect size Cohen’s $d = 0.44$) and a higher influence on writing motivation. Among these instructional studies, the most prevailing model of instruction is the Self-Regulated Strategy Development (SRSD), which was grounded in sociocognitive theory and SRL theory (Harris & Graham, 1996). This SRSD model was composed of six recursive stages in the process of intervention, encompassing developing and activating background knowledge; discussing; modelling; memorising; supporting; and independent performance. The major goals of SRSD were “helping students master the higher-level of cognitive process; develop autonomous, reflective, self-regulated use of effective writing strategies; increase knowledge about the characteristics of good writing; and form positive attitudes about writing and themselves as writers” (Graham & Harris, 1996, p. 352). With regard to L1 writing, a range of empirical studies has evidenced the salient effect of the SRSD model on improving academic achievement and cultivating self-regulated learners from primary education to high school (Graham & Harris, 2005; Harris et al., 2011). The model has produced significant improvement in five main aspects: writing approach/knowledge, self-regulation strategies, text quality, self-efficacy generating and writing process

(planning, organising and revising) across genres (Harris & Graham, 2009; Mason et al., 2008). Although the SRSD model has produced optimistic effects in L1 writing, whether it is still valid and effective in L2 contexts, especially EFL writing, needs more extensive elaboration.

On the whole, research on writing instruction grounded in SRL is fruitful in L1 contexts and should be worth evaluating in terms of its contribution to L2 writing. Harris et al. (2011) posited that “understanding the role of self-regulation in the development of writing abilities, the difficulties students encounter with self-regulation of the writing process, and effective instructional practices for developing competence in self-regulated writing is clearly essential to help students develop as writers” (p. 189). A review of the related literature suggests, however, that research pertaining to SRL in EFL writing is cursory. Given the complexity of writing and individual differences in EFL contexts (Leki, Cumming, & Silva, 2010; Matsuda & Silva, 2014), the previous findings could not be directly applied to EFL learning. Therefore, the significance of SRL and how the instruction works in the context of L2 writing deserves full empirical investigation.

3.2 L2 Writing Strategies

3.2.1 Definition and classification

Informed by abundant research on process writing in L1 since the 1980s, many researchers are committed to investigating various L2 writing strategies used during the composing or learning-to-write process (Leki, 1995; Raimes, 1985; Roca de Larios, Manchón, Murphy, & Marín, 2008; Roca de Larios, Murphy, & Manchón, 1999; Sasaki, 2000; Sengupta, 2000; Zamel, 1982, 1983). These empirical studies have confirmed the essential role of L2 writing strategies in improving writing achievement.

However, this line of enquiry lacks an agreed operational definition or classification of writing strategies as it did in research on LLSs due to the “shaky theoretical foundation of research on learner strategies” (Manchón et al., 2007, p. 230). Early research on L2 writing strategies grew out of the process writing approach from cognitive theory, which viewed writing as “a goal-oriented, recursive, cognitively-demanding, problem-

solving task” (Manchón et al., 2007, p. 229). The cognitive view of learning processes helped researchers gain insights into the mental actions writers engage in while composing (Flower & Hayes, 1981). Writing strategies, therefore, were regarded as “composing behaviour” (Raimes, 1987) or “a process or operation applied to the task of writing” (Whalen & Menard, 1995).

Since the mid-1990s, the development of sociocognitive theory in L1 writing drove many researchers to define and explore L2 writing strategies as conscious human actions (Cumming, 1998; Leki, 1995; Petrić & Czár, 2003; Riazi, 1997). As Cumming (1998) argued, writing is accepted as a “text”, “composing” and “social construction” (p. 61). Leki (1995) equated writing strategies with the “methods these participants used to approach and complete the writing tasks assigned” (p. 240). Petrić and Czár (2003) defined writing strategies as “actions or behaviours consciously carried out by writers in order to make their writing more efficient” (p. 189).

From the problem-solving paradigm, writing strategies refers to the control mechanisms of writers’ behaviour (Cumming, 1989; Pennington & So, 1993) and problem-solving skills (Cumming, 1989; Sasaki, 2004; Wong, 2005). In this line, Sasaki (2004) regarded writing strategy as “a writer’s mental behaviour employed to achieve a goal in the ill structured problem-solving [writing activities]” (p. 541). This definition is similar to Wong’s interpretation of writing strategies as “decisions taken to cope with the problems (both linguistic and rhetorical) posed by the writing tasks as perceived by the writers” (Wong, 2005, p. 31). These definitions collectively reveal the control mechanism for the writing process, in which writers deliberately regulate their behaviour in completing different tasks (Manchón et al., 2007).

Informed by different theories and empirical studies, the classification of writing strategies is mainly grounded in the following paradigms, which include: cognitive models of L1 writing with a focus on process writing (Flower & Hayes, 1981), empirical research on language learning and using strategies in general contexts (O’Malley & Chamot, 1990; Oxford, 1990), a sociocognitive perspective (Leki, 1995; Riazi, 1997) and goal theories in educational psychology (Cumming et al., 2002).

The process writing approach originated from cognitive theory on the three primary cognitive processes: planning, translating and reviewing (Flower & Hayes, 1981). Writing strategies are generally classified into three phases from pre-writing, drafting (composing/while-writing) to after writing (revising). This line of understanding informed many studies exploring writing strategies throughout the triadic processes (Cumming, 1989; Sasaki, 2000) or specifically on a certain type, such as planning (Chien, 2012; G. Hu & Chen, 2007; Lally, 2000; Raimes, 1987; Victori, 1999), writing (Chenoweth & Hayes, 2001; Zimmerman, 2000), restructuring (Rosa de Larios et al., 1999) or revision (Berg, 1999; Hall, 1990; Porte, 1995; Sengupta, 2000; Takagaki, 2003; Yasuda, 2004). Some researchers also explored specific actions related to writing processes, such as organising the content for planning, translating in the writing process (Cumming, 1989; Victori, 1999) or intensively focused on metacognitive strategies with the tripartite distinction that included planning, monitoring and evaluation (Chamot & EI-Dinary, 1999; Victori & Lockhart, 1995; Wenden, 1991; Zhang, 2010).

Conceptualised in applied linguistics (e.g., learning autonomy), some researchers applied the function classification of learning strategies to explore multiple dimensions of writing strategies (Oxford et al., 2014). This classification of writing strategies was under the influence of two prominent taxonomies in general LLSs. They are O'Malley and Chamot's (1990) three broad types of learning strategies including cognitive, metacognitive and social-affective aspects and Oxford's (1990) six-factor strategies, including direct (memory, cognitive, compensation) and indirect (metacognitive, affective and social). These classifications were directly applied in different learning contexts (Baker & Boonkit, 2004; Grainger, 2005; Khaldieh, 2000; Olivares-Cuhat, 2002; Petrić & Czár, 2003). However, only a few studies have evaluated the validity of the conceptual classifications of LLSs (e.g., Hsiao & Oxford, 2002). For example, Hsiao and Oxford (2002) evaluated different functional classifications of learning strategies by confirmatory factor analyses and they found Oxford's (1990) six-part taxonomy had the best fit compared with other models (e.g., O'Malley & Chamot, 1990). However, this empirical evaluation of theoretical classification of learning strategies was not validated in a specific writing setting.

As the social dimension has gained its essential position in explaining the composing process, many researchers reclassified writing strategies to reflect the sociocognitive nature of writing activities (Leki, 1995; Riazi, 1997). For example, Leki (1995) reclassified writing strategies into ten categories that included clarifying and focusing strategies for completing a task; using previous knowledge or experience; making use of social contexts such as using training or feedback from others; taking a stance towards teachers' demands; and time and effort management. She called for the need to depict "the fullest range possible of strategies employed" (Leki, 1995, p. 240). This assumption was further corroborated by Riazi (1997), who concluded that literacy production is "an interactive social-cognitive process in that production of the texts required extensive interaction between the individual's cognitive process and social/contextual factors in different ways" (p. 105).

Embedded in the sociocognitive paradigm, some researchers explored writing strategies from goal theories in educational psychology (Cumming, Busch, & Zhou, 2002). For instance, Cumming et al. (2002) defined writing strategies as "the level of strategic operations for the activity of writing" directed by goals (p. 193). They favoured a research path in which strategies "are analysed in reference to the goals people have to motivate and guide their task performance as well as other essential aspects of these activity structures and the contexts in which they are embedded" (p. 193). Cumming et al grouped writing strategies into five categories that included peer learning from others (e.g., peers, teachers, friends and tutors), self-regulation (planning, editing and revising), stimulation (e.g., playing music or talking to people) and use of tools for resourcing (e.g., books, magazines, computers). This line of classification reveals the integration of social and emotional regulation into the lens of writing strategies, which is similar to categories of SRL strategies that embrace cognitive, metacognitive, social and motivational aspects (see Schunk & Ertmer, 2000; Zimmerman & Martinez-Pons, 1986).

Taken together, this line of enquiry has integrated social and cognition dimensions into the development of L2 writing processes, directed by learners' goal orientation. Such a perspective fits well with post-process writing theory (Kent, 1999), which takes contexts and cultural factors into account in the writing process (e.g., Baker & Boonkit, 2004). This trend indicates that research on L2 writing strategies has shifted from

purely a cognitive to a sociocognitive orientation revealing the multidimensional nature of the writing process (Hayes, 2012; Silva & Matsuda, 2010).

3.2.2 Research on L2 writing strategies

Research on L2 writing strategies has been largely influenced and directed by achievement in L1 contexts. In line with the theoretical understanding of L1 composing processes, numerous studies have explored how learners' language proficiency (i.e., high proficiency and low proficiency) and learning experience (i.e., novice/expert; skilled/less skilled; successful/less successful) influenced the use of certain types of writing strategies (see also Manchón et al., 2007; Oxford, 2013, for a review). For example, Zamel (1982) employed a case study approach to explore advanced ESL writers' use of strategies in the writing process and found that successful writers went through a process of revising and redrafting their thoughts as they write until they came to a final expression of their ideas. Her later research revealed that the skilled ESL writers reported higher frequency of using revising strategies than the unskilled ESL writers and they also paid more attention to the ideas and revision at the discourse level, and displayed more recursive behaviour in their writing and editing processes than their counterparts (Zamel, 1983). Raimes (1985) investigated eight unskilled ESL students' writing protocols and found that unskilled L2 writers were more attentive to "local" than to "global" elements of writing, so they redrafted their writing for grammar concerns but used minimal planning, revising and editing strategies. Sasaki (2000) reported that expert EFL writers spent more time planning and organising their thoughts and ideas. Cumming (1989) collected data from 23 young Francophone Canadians studying in a bilingual programme and found that more expert writers deployed control strategies for goal setting and for the online management of goals. These experts demonstrated a self-regulated learning process which entailed more problem-solving behaviour, while less expert writers did not have sufficient use of self-regulation.

Earlier studies, as a whole, have shown great interest in evaluating different cognitive learning strategies in the L2 writing process with a focus on planning, writing and revising. However, informed by the development of L1 writing theory, researchers have acknowledged that writing is a "socially situated, cognitive, communicative activity" (Kent, 1999, cited in Manchón et al., 2007, p. 229). A number of L2 studies took a more

inclusive view of writing strategies and conducted descriptive exploration of how writing proficiency related to the use of a range of learning strategies (Bai, Hu, & Gu, 2014; Baker & Boonkit, 2004; Gordon, 2008; Khaldieh, 2000; Wong, 2005). For example, Wong (2005) adopted a case study approach to investigate four advanced L2 writers (pre-service teachers) in a postgraduate teacher education programme. He found that these advanced writers made use of a similar range of composing strategies relating to cognition, metacognition and affect, but they applied these strategies in different levels or for different purposes. The finding revealed the individualised feature of writing strategies, which were under the influence of writers' mental representations of the intended audience and of the rhetorical purpose for performing the writing tasks. Influenced by post-process theory (Kent, 1999), Baker and Boonkit (2004) conducted a mixed-methods study on undergraduate students enrolled in an EAP course in a Thai university to identify the most frequently used strategies and differences between successful and less successful learners in reading and writing. They adopted Oxford's (1990) six taxonomies of learning strategies and their results showed that metacognitive, cognitive and compensation strategies were the most frequently used strategies. However, there was little difference in the frequency of using each of the six categories between the two language proficiency groups because of the homogenous English background. Therefore, Baker and Boonkit (2004) concluded the study by pointing out the importance of taking account of contexts and culture in future research on writing strategies.

In the recent research, Bai, Hu and Gu (2014) conducted a quantitative study investigating the relationship between writing strategies and English proficiency in Singapore primary schools. They adopted O'Malley and Chamot's (1990) classification of writing strategies and they found that Singaporean pupils reported using a range of writing strategies at medium frequency. English proficiency was a significant factor influencing the use of several writing strategies (e.g., planning, text-processing, revising, monitoring and evaluation). They also found that low-proficiency pupils reported using planning, help seeking and affective management strategies more frequently while the high-proficiency students reported using more planning and text processing strategies. The medium-proficiency students showed more preference for socio-affective strategies (help seeking and affective managing).

Another strand of research investigated how L2 writing strategies related to the use of L1 writing strategies and L1 writing proficiency. Some studies (e.g., Cumming, 1987; Matsumoto 1995; Pennington & So, 1993; Whalen & Menard, 1995; Zamel, 1983) found the similarities between the use of L2 and L1 writing strategies. Cumming (1989) also pointed out that L2 writers tended to use the L1 for generating content for their writing tasks. For example, the inexpert writers consistently used their L1 to generate ideas while the expert writers used L1 for generating content and lexical searches (Cumming, 1989). Krapels (1990) reviewed the previous studies on writing strategies and pointed out that writers transferred their skills from writing in their native languages; therefore, a lack of L2 writing competence was often caused by a lack of L1 writing skills. However, Krapels also warned of the inconclusive findings, as the studies reviewed were conducted with a small number of participants. Silva (1993) reviewed 72 studies into L2 writing and posited that in spite of the general similarity between L1 and L2 writing strategies, the L2 writing process involves less planning and reviewing but more attention to revision on grammar. Cumming (2001) further posited that L1 and L2 writing competence are positively interrelated, which means “like unskilled writers in their mother tongues, people who do not write well in the second language are often unable to (or unsure of how to) plan, manipulate, monitoring, or revise their ideas or texts effectively” (2001, p. 5). The previous studies on the whole have shown that writers had analogous use of both L1 and L2 writing strategies under the influence of L1/L2 language proficiency. In addition, the transfer of L1 strategies to L2 was under the influence of culture, contexts and writing processes (see also Manchón et al., 2007).

Many empirical studies on writing strategies reviewed above were mainly conceptualised from cognitive or sociocognitive perspectives. Some studies have also integrated sociocultural theory into this enquiry (e.g., Canagarajah, 2007; Coyle, 2007; Lei, 2008; Villamil & De Guerrero, 1996). For example, Villamil and De Guerrero (1996) integrated mediation from sociocultural theory into investigating peer revision strategies used by two Spanish-speaking students when writing in an L2. They found five types of strategies that included employing symbols and external resources; using the first language; providing scaffolding; resorting to interlanguage knowledge; and vocalising private speech. Lei (2008) explored two EFL learners’ use of writing strategies within the Activity Theory through students’ interviews, stimulated recall and

process log in a Chinese university. She found that the two learners used four types of writing strategies to mediate their writing processes, which included artefact mediation, rule mediation, community mediation and role mediation.

Although a range of studies has examined the differences between students from different proficiency levels, none of them has observed L2 writers for longer than one term, which makes it impossible to have a comprehensive understanding of the development of L2 writing behaviour. Only a few previous studies to date have explored how psychological and social factors influenced the use and the change of writing strategies through longitudinal observation (Sasaki, 2004, 2007). For instance, Sasaki (2004) compared the changes of writing behaviour between EFL (at-home university) and ESL (study-abroad) Japanese students during 3.5 years through multiple sources of data. This longitudinal study revealed that students from both groups improved their English proficiency, English composition quality/fluency and confidence in writing (self-efficacy). In addition, her study found that overseas experiences were helpful for improving students' use of writing strategies and writing motivation. These findings were further corroborated by her later research (Sasaki, 2007), which conducted a one-year observation of seven Japanese university students who spent four to nine months in English-speaking countries. Sasaki also found that the study-abroad group used more local plans and became more motivated to write better L2 compositions than the at-home group.

3.2.3 Evaluating L2 writing strategies

As previously reviewed, most of these studies adopted qualitative methods that drew on concurrent or retrospective introspection techniques (e.g., think-aloud protocols, task-based interviews) to solicit more situational and individualised writing strategies (e.g., Coyle, 2007; Sasaki, 2004; 2007; Zamel, 1983). In the most recent lines of enquiry, some researchers (Griffiths & Oxford, 2014; Oxford, 2013; Woodrow, 2005) call for a need to use more qualitative methods (e.g., narrative inquiry in the forms of learner diaries, learner history, dialogue journal and learning log) to obtain a rich description of LLSs, which is also applicable in different English skills, such as writing (see Oxford et al., 2014, for an example). However, it is a pity that few studies (e.g., Cumming, 1989; Rosa de Larios et al., 1999) reported the reliability of the qualitative coding and

analysis (inter-rater and intra-rater reliability coefficients). As Manchón et al. (2007) suggested, encoding of introspected data must have a theoretical basis and the reliabilities of interpreting protocol data should also be reported.

This line of research also tended to employ quantitative methods with an aim to depict the pattern of writing strategies used by learners with different writing proficiency and how other internal and external factors influenced the use of writing strategies. To achieve this purpose, questionnaires were a popular tool widely used in soliciting LLSs. The use of questionnaires provides more holistic and large-scale information for researchers to depict the pattern of using strategies (Petrić & Czár, 2003). In addition, this quantitative method is powerful to establish a model of how writing strategies interact with social and psychological factors in L2 contexts with significant pedagogical implications (Hsiao & Oxford, 2002; Petrić & Czár, 2003). O'Malley and Chamot (1990) also pointed out that questionnaires are a useful method to solicit individual perceptions and interpretations of their own learning experience that can provide explanation for behaviour (e.g., trait-like features). However, compared with the progress of learning strategies in other skills such as speaking, listening, vocabulary or reading (Cohen, 2008a; Graham, & Macaro, 2008; Tseng et al., 2006; Zhang, 2008;), not enough attention has been given to soliciting writing strategies through questionnaires, which might be due to "the great complexity and challenge involved in developing a reliable and valid questionnaire to assess learners' use of writing strategies" (Bai et al., 2014, p. 357). Some studies used self-developed or modified questionnaires to depict the pattern of writing strategies used by learners (e.g., Gordon, 2008). Unfortunately, such questionnaires were largely ad hoc creations, without being theoretically validated in relation to specific sociocultural contexts. One way to overcome some of these shortcomings as discussed above is through the use of validated questionnaires with clear reliabilities, an approach advocated by Petrić and Czár (2003) for being able to provide holistic information on a large-scale for researchers to depict the pattern of students' use of writing strategies in a specific learning context. In this context, Manchón et al. (2007) argued for continuing the enquiry of writing strategies with sound theoretical ground and methodologies.

3.2.4 Strategies-based writing instruction in L2 contexts

Strategy instruction has been well established in L1 writing contexts in which students are provided with effective strategies for completing writing tasks so that they would be more resourceful, self-reflective and goal-oriented with high motivation and confidence (Graham & Harris, 1996). So far, the popular format of explicit instruction normally includes the “development of students’ awareness of their strategies, teacher modelling of strategic thinking, identifying the strategies by name, providing opportunities for practice and self-evaluation” (Chamot, 2005, p. 123). Previous empirical research in L1 settings affirms strategies-based writing instruction is useful to specify the writing process to achieve learners’ goals, reveal their mental operation, provide new tools to regulate the writing process and ultimately enhance writing knowledge, competence and achievement (Brunstein & Glaser, 2011, Graham & Harris, 1994, 2005; Harris et al., 2011; Harris & Graham, 2009; Harris, Graham, & Mason, 2003).

Previous achievement in L1 contexts shows promise in L2 writing. Descriptive studies on L2 writing strategies have shown that students with different writing proficiency all experienced various difficulties in composing processes such as limited words or grammar knowledge and/or struggling with coherence of the ideas and production of appropriate target language discourse (Chamot, 2005). A cognitive view suggests that learning strategies are teachable and learnable (Chamot & O’Malley, 1994; Cumming, 2001; Griffiths & Oxford, 2014). Based on these empirical findings, Zamel (1982, 1983), along with other researchers (e.g., Raimes, 1985) stressed that teaching should be involved in every stage of the writing process rather than purely targeted on products. Along the same lines, Cohen (2008b) posits that “it is important not only to teach the L2, but also to support students in being strategic in their learning and use of the L2, since students’ use of strategies has been proven to enhance outcomes” (p. 45).

The positive effect of strategy instruction has been highlighted in a rich body of L2 literature (Rubin, Chamot, Harris, & Anderson, 2007; Plonsky, 2011). Some studies conducted descriptive studies of how the previous writing instruction influenced use of writing strategies (e.g., Rinnert & Kobayashi, 2001; Sasaki, 2004) or intervention studies to measure the effects of strategy training from a holistic perspective (e.g., Bai, 2015; De Silva & Graham, 2015; H. Yang & Plakans, 2012; McMullen, 2009; Sasaki,

2000) or more specific strategies such as planning and/or revising (e.g., Berg, 1999; Ching, 2002; Sasaki, 2002; Sengupta, 2000), formation (Graham & Macaro, 2007; Roca de Larios et al., 2008), translation (e.g., A. Cohen & Brooks-Carson, 2001), self-monitoring in composing (e.g., Cresswell, 2000) and metacognitive strategies (e.g., Lam, 2014; Nguyen & Gu, 2013; Wei, Chen, & Adawu, 2014).

Some researchers (e.g., McDonough, 1999; Rees-Miller, 1993, Manchón et al., 2007) have called for more rigorous, longitudinal research towards the instruction of “a coherent theory of how strategies work, how they are selected, invented and discarded in favour of better ones, how they related to enlarging the individual’s linguistic repertoire, and to relate to what s/he can already do in the first language” (McDonough, 1999, p. 14). However, among the range of instruction research, only a few longitudinal studies (e.g., Graham & Macaro, 2007; Sasaki, 2000; 2004) have been conducted over the past three decades to map the changes in students’ strategic behaviour over time. For example, Sasaki (2000) compared the cognitive processes of L2 Japanese EFL learners at different proficiency levels of writing (experts and novice students’ groups that included more-skilled writers and less-skilled writers) and then explored the effects of a six-month process writing instruction on the novice students’ group with eight students. These novice students were given strategy instruction on paragraph writing in English in regular classes once a week for 90 minutes. The researchers as instructors taught the students about process writing strategies such as planning and revising. Prior to the instruction, the qualitative data collected from the stimulated recall protocols revealed that both the experts and novices reported a similar number of strategies (e.g., planning, retrieving, generating ideas, verbalising, translating, researching and evaluating). In addition, the experts showed more preference for rhetorical refining and rereading strategies while the novice students reported a high percentage in using translating and local planning strategies. After the process writing instruction, the novice students reported more time in global planning and some less-skilled writers tended to use some strategies such as rereading and global planning. Her study revealed that global and local planning were of importance in the writing process and could be taught through strategy instruction. However, no significant differences were found in the quality of the students’ composition or writing fluency, suggesting that writing expertise cannot be acquired over a short period of time as justified by Sasaki (2000).

She also pointed out the need to investigate affective factors (e.g., motivation and attitude) in further research for a better understanding of writing behaviour. In order to test these findings, Sasaki (2002) replicated the study to two groups of Japanese EFL writers (12 experts and 22 novices), whose findings corroborated her previous studies.

Macaro (2001) implemented an Oxford Writing Project in six classes of secondary students of French in England. Data were collected through a strategy questionnaire, writing tasks and think-aloud interviews during a French writing task. Students in the experimental groups received a five-month instruction on a variety of writing strategies that included the metacognitive strategies of advance preparation, monitoring and evaluating. Results showed that the experimental groups made significant improvement in the grammatical accuracy of their writing and changed their deployment of strategies with less reliance on the teacher but more preference for using the dictionary and paying more attention to their written work.

Some scholars (Ching, 2002; Lam, 2014; Wei et al., 2014; Zhao, 2011) applied self-regulation theory into L2 strategy instruction. As Ching (2002) argued, strategy instruction alone “is not sufficient to improve students’ cognitive model” because “students are often not aware of their learning deficiencies and over-estimate the quality of their learning” (p. 265). Ching (2002) administered a seven-week strategy and self-regulation instruction to engineering students who were enrolled in a Technical English course in a Malaysian university. The study included practice in different forms of pre-writing planning, as well as revising during writing and between drafts with a strong focus on peer-evaluation and explicit reflection on the nature of the participants’ own writing processes and the effectiveness of strategy use. This mixed-methods research found that the instruction not only equipped students with knowledge of using planning and revising strategies in an argumentation essay but also improved their use of some self-regulation variables such as self-evaluation, seeking information or social help, organising and transforming. In addition, the instruction also had a positive effect on students’ self-efficacy and self-determination. However, no change was found in students’ attribution after the experiment. This study revealed that the integration of self-regulation into L2 strategy instruction was useful to foster sufficient self-awareness

among students of their own learning processes, which in turn contributed to the active use of strategies and positive academic outcomes.

Zhao (2011) empirically integrated SRL theory into writing strategy instruction with 68 university students of an English major in China. The instruction followed the procedures of modelling, emulating, controlling and regulating proposed by Zimmerman (2000). Results showed that the students from the experimental group outperformed their counterparts in the control groups in writing performance, self-efficacy, intrinsic value and efficacy attribution awareness. The experimental group also reported using more planning, monitoring and intrinsic motivational regulation strategies. Such positive effects on writing strategies and intrinsic values were maintained after ten weeks, revealing the sustained effect of the self-regulation strategy-based writing instruction.

Lam (2014) investigated how explicit strategy instruction in the process-oriented writing course shaped the students' metacognitive knowledge and facilitated their development of SRL in EFL writing. Multiple data were collected from two university students in Hong Kong via stimulated recall, individual interviews, a self-reflection journal of their learning histories and text analysis. A 15-week process-oriented writing course was implemented with a focus on some composing strategies (i.e., prewriting, planning, redrafting, evaluating, revising and editing) in a cyclic writing process. The written tasks included in the course of completing different genre tasks (i.e., procedure, information report and exposition). Results showed that participants improved their metacognitive knowledge of using planning, reorganising and problem-solving strategies and became more motivated and confident in the writing process.

Wei et al. (2014) investigated how strategies-based instruction on metacognitive strategies (i.e., planning and organising) in multi-media environments affected two lower-achieving ESL students' writing development and their use of strategies. This was a ten-session strategy-based writing (SBI) instruction based on a Cognitive Academic Language Learning Approach (CALLA) model with the aid of graphic organiser software. Their findings showed that the two lower-proficiency students benefited from the technology-supported SBI in terms of improving their ability to generate ideas, producing more logical organisation of essays and becoming more

engaged and motivated during their prewriting activities using the graphic organiser software. They also posited the necessity to embrace a cluster of LLSs such as socio-affective strategies in order to generate more positive results of SBI, which echoed Macaro's (2001; 2006) claim.

Having acknowledged the complex and inconsistent research design in SB writing instruction, some scholars (cf. Hassan et al., 2005; Chamot, 2005; Manchón et al., 2007; Plonsky, 2011) conducted a review or meta-analysis to provide a systematic and more reliable way to better evaluate the effects of strategy instruction in an L2. For example, Plonsky (2011) reviewed a total of 61 studies on L2 strategy instruction and reported a medium overall effect of strategy instruction on writing proficiency (Cohen's $d = .49$). He also found that the effectiveness of SB instruction was under the influence of type and number of strategies, foreign or second language contexts and the length of intervention. His findings resonated with Hassan et al.'s (2005) review, pointing out some open questions affecting the effect of the SB instruction: the mediating effect of learner-internal and learner-external factors and the possible different effects caused by some variables (e.g., the time of intervention programme, learning contexts and treatment).

An array of empirical studies has shown that explicit strategy instruction is beneficial for L2 learners to alleviate their cognitive burden, relieve their psychological frustrations in learning to write and improve their intrinsic motivation and writing performance (e.g., A. Cohen, 2008b; Manchón et al., 2007). However, a number of issues still remain, such as the methodological shortcomings (e.g., small sample sizes, non-random group assignment, or exclusion of comparison groups); the complexity of variables that affect L2 strategy use; a lack of valid and reliable instruments; and the absence of a comprehensive theory (A. Cohen et al., 2007; Chamot, 2005; Hassan et al., 2005; Manchón et al., 2007; Plonsky, 2011). In addition, some researchers (e.g., Andrade & Evans, 2012; Oxford, 2013; Zhang, 2008) have commented that the assessment of writing intervention intensively focused on writing proficiency, competence and writing quality but had a lesser focus on other psychological and social factors.

Given the problems noted above, Manchón et al. (2007) argued for exploring strategy training in socially-situated approaches to understanding learners' actions and called for more longitudinal investigation of the effect of training students in the use of strategies. They believed that the longitudinal study (at least ten to 15 weeks) with a theoretical framework would help resolve the uncertainty of the effect of strategy instruction on language development. In addition, they also suggested researchers to "take a stance regarding which theoretical framework is going to inform their enquiry and exploit it in full" (Manchón et al., 2007, p. 248). Plonsky (2011) argued for selecting learning strategies based on the pre-treatment measures of strategy use to design individualised strategies-based writing instruction. In order to increase the effectiveness of SB instruction, it is necessary to conduct more in-depth investigation with a solid theoretical framework and reliable measures, designed for a specific learning context (Griffiths & Oxford, 2014; Gu, 2007).

3.3 Research on Writing Strategies in China

In many EFL settings, such as China, writing is often perceived as a difficult and daunting task by learners (Zhang, 2013). Many Chinese students equate English writing to taking a course or passing a test, which might be due to the conventional product-based approach adopted in writing classrooms or the negative wash-back effect of classroom teaching (L. Yang & Gao, 2013). In other words, writing instruction may focus too much on test preparation at the expense of fostering learners' active role in learning to write. Previous research on EFL writing instruction has revealed that the product-oriented writing courses in Chinese universities have focused on written text/sample modelling with less emphasis on instructing students in specific strategies so that they can come up with successful EFL composition, or for enhancing their writing motivation and interest (J. Wang, 2007; Wen & Wang, 2004; Zhan, 2012; Z. Qin, 2009). Some researchers have also posited that, despite scholars' interest in examining EFL writing strategies as cognitive constructs, writing strategies were not integrated into the curriculum and instructional practices at the university level (e.g., Woodrow, 2011; Zhang, 2003). They found that EFL practitioners often suffered from lack of sufficient knowledge about what strategies their students are good at or weak in

when learning to write; neither do they know how to effectively integrate rich repertoires of writing strategies into teaching.

Informed by achievement in L2 writing, research on writing strategies has gained its popularity in China with foci on descriptive studies, the transferring of L1 to L2 writing strategies, individuals' differences on the use of strategies and the effect of strategy instruction. A majority of research (e.g., Chien, 2012; Lei, 2012; S. Yang, 2002; W. Wang, & Wen, 2002; Xiu & Xiao, 2006) used a small-scale descriptive analysis in the form of retrospective measures (e.g., think-aloud or interviews) to investigate how writing proficiency differences influenced the use of writing strategies. For instance, Yang (2002) investigated the use of writing strategies during the writing process and classified students into two levels of writing proficiency based on their writing test scores and questionnaire results. Data collected from the think-aloud protocols showed that the successful writers differed from unsuccessful ones in planning, revising and focusing more on ideas and idiomatic expressions, while the unsuccessful students paid much more attention to spelling and grammar in the composing process and sentence and discourse in the course of revising. Chien (2012) explored how Taiwan students' use of writing strategies related to their achievement in English writing. Data were collected through concurrent think-aloud protocols and immediate retrospective interviews. Chien found that the high-achieving student writers performed better than their low-achieving counterparts in the use of planning, generating texts, revising and editing (e.g., making meaning changes, fixing grammatical and spelling errors), which is in line with other research in L2 (e.g., Bai et al., 2014; Sasaki, 2000; Wong, 2005; Zamel, 1983).

Some researchers (e.g., Lei, 2008, 2012; Mu & Carrington, 2007) explored writing strategies from sociocultural theory to explore the complex patterns of strategy use by student writers. For instance, Lei (2012) took a sociocultural approach to explore the dialectic relationship between cognition and sociocultural contexts, and the importance of mediating resources in strategy use. She recruited six proficient English majors from a Chinese university through interviews and found four types of writing strategies (i.e., artefact-mediated, rule-mediated, community-mediated and role-mediated writing strategies).

In this regard, some scholars further explored the factors influencing the use of writing strategies such as writing tasks (G. Hu & Chen, 2007; W. Wang & Wen, 2002) and L1 writing strategies (Mu & Carrington, 2007). For example, Mu and Carrington (2007) examined the writing strategies reported by three Chinese postgraduate students in Australia in an authentic context. Data were collected from multiple sources in the form of a semi-structured interview, a questionnaire, retrospective post-writing discussion and writing text analysis. Findings showed that the students used a wide range of strategies such as metacognitive, cognitive and social/affective strategies which were transferred from L1 to L2 positively except for the rhetorical strategies. Their study lent empirical support to the nature of L2 writing proposed by Silva (1993) as a strategic, rhetorical and linguistic process.

Along this enquiry, another popular strand was applying quantitative measures to investigate how writing strategies related to writing proficiency/achievement (Chen, 2011; Chien, 2012; G. Hu & Chen, 2007; Wu & Liu, 2004; Xiu & Xiao, 2006) and motivational factors such as self-efficacy and motivational beliefs (H. Li, 2013; J. Zhao, 2011). Wu and Liu (2004), for instance, used SEM to investigate the causal relationships between writing metacognition (i.e., metacognitive strategies, metacognitive assessment of writing problems and metacognitive assessment of tasks) and writing performance. Their results showed that metacognition (metacognitive strategies, metacognitive assessment of writing problems and metacognitive assessment of tasks) was a significant predictor of writing achievement and it produced more influence on writing performance than language proficiency. Chen (2011) adapted Petric and Czarl's (2003) questionnaire to investigate Chinese non-English major students' use of writing strategies and how they related to their writing achievement. Her study found significant relations between pre-writing strategies and revising strategies (e.g., self-monitoring, paying attention and peer-cooperating) with writing scores collected from an essay test. Results also revealed that writing strategies as a whole had a significant predictive effect on the writing achievement, content scores and language scores respectively.

Of the many strands of writing strategy research, the one that is relevant to the current study is research that Zhao (2011) carried out to test a model of self-regulated EFL

writing that involved components of motivational beliefs, motivational self-regulation, strategy use and performance in EFL writing. Data were collected from 617 year-two English majors in mainland China. The study lent support to the essential role of motivational awareness, the use of motivational regulatory strategies and mastery and outcome goals in promoting self-regulated writing competence in EFL settings.

Although great achievement has been made in observational research on writing strategies, only a few studies have explored strategy instruction in the EFL writing classroom with an intensive focus on metacognitive strategies (e.g., Ji, 2002; Xiao, 2007). Liu and Gao (2011) conducted a meta-analysis to examine the impact of metacognitive strategy instruction in China. They found that the explicit metacognitive strategy-based writing instruction did not only help Chinese students develop their meta-awareness in English writing but also generated a significant effect on their writing achievement. Many scholars called for more exploration on metacognitive instruction in EFL writing classroom (Wu & Liu, 2004; Xiao, 2007; Zhang & Zhang, 2013). It is clear that much more could have been done to improve EFL writing by providing explicit writing strategies to students in China (Teng & Zhang, 2016a). Even if some empirical studies were conducted during the past two decades in L2, the results cannot be directly applied to the Chinese EFL contexts given that writing is a contextualised construct with multiple dimensions.

Taken together, all these empirical enquiries have acknowledged the essential role of strategy use in improving academic outcomes and have consistently revealed that the use of writing strategies varied with tasks and individual's internal and external conditions. These findings also underscored the need to take diverse sociocultural contexts into account for uncovering the complex patterns of strategy use in the study of L2 writers. Although some studies have explored different writing strategies used by Chinese students, the previous studies were restricted to a typical process approach such as multiple drafting, revising, teacher or peer feedback, or only focused on some cognitive and/or metacognitive strategies without systematic instructional guidance or theoretical foundation. In addition, a plethora of observational and interventional studies has been conducted with a focus on cognitive and metacognitive strategies. However, little attention has been given to exploring other categories of writing

strategies such as social and affective strategies from SRL theory in EFL writing instruction in China. Research on explicit writing instruction in Chinese contexts is still at an early stage, which needs more exploration on the feasibility and effectiveness of incorporating process and strategies-based instruction into regular courses.

3.4 Motivation and Writing

Motivation, as a key construct in the field of educational psychology, explains why people select a particular activity, how long they are willing to persist in it and what effort they invest in it (Boscolo & Hidi, 2007). Motivation is an essential element of successful language acquisition and is a dynamic process subject to continuous flux or change (Dörnyei, 2001). Many researchers have found that L2 learners' motivation was influenced by both external factors related to the sociocultural and contextual background of the learner and internal factors (e.g., attitudes towards the activity, intrinsic interest and value of tasks or activities) related to the individual learner (e.g., Dörnyei & Ushioda, 2013; Lo & Hyland, 2007). The last few years have witnessed increasing research on the roles of motivational processes, such as goals, attributions, self-efficacy, outcome expectations, self-concept, self-esteem, social comparisons, emotions, values and self-evaluations (Schunk & Zimmerman, 2008). A range of research has found that highly motivated students outperformed poorly motivated students in terms of paying attention, making progress, effort giving and obtaining more satisfaction in learning processes (Clark, 2012; Cumming, Kim, & Eouanzoui, 2007; Zimmerman & Kitsantas, 1999; Zimmerman & Schunk, 2008). Some researchers have pointed out that motivational beliefs (i.e., value, control of learning, intrinsic goal, self-efficacy) influence the use of language learner strategies (e.g., Kormos & Csizér, 2014; Pajares & Valiante, 2006; Wolters, 1999).

The significant effect of motivational beliefs on learning behaviour and performance becomes prominent in writing contexts. As Zimmerman and Risemberg (1997) argued, writing is “a social cognitive process wherein writers must be aware of readers' expectations and must be willing to devote the personal time and effort necessary to revise text drafts until they communicate effectively” (p. 76). Many researchers have argued that “composing tasks often are inherently difficult for the writer because they tax numerous lower- and higher-order psycholinguistic processes that are situated

within a dynamic motivational state” (Troia, Harbaugh, Shankland, Wolbers, & Lawrence, 2013, p. 18). This means that successful L2 writers need to be motivated to “initiate, maintain, or supplement their willingness to start, to provide work toward, or to complete a particular activity or goal” (Wolters, 2003, p. 190).

In addition, writing achievement is contingent upon the degree of individuals’ motivational control to deploy a variety of strategies to increase their effort and persistence in completing a task (Manchón, Roca de Larios, & Murphy, 2007). As writing strategy research takes on greater breadth and depth, the importance of context in strategy use gains increasing attention to psychological factors such as motivational beliefs. Some previous studies have found that motivational beliefs directly influence cognitive engagement and metacognitive regulation (e.g., Wolters & Benzón, 2013; Zimmerman, 2011).

Past studies have intensively focused on how to increase students’ motivation in the teaching and learning process while ignoring how to arouse students’ own motivational control through deploying a range of strategies, which is a necessary process to foster self-regulated learners/lifelong learning (Zimmerman & Schunk, 2008). While many studies have intensively explored learners’ cognitive and metacognitive strategies in completing writing tasks (Zhang et al., 2016), little attention has been paid to the essential role of learners’ strategies to regulate their motivation in learning to write. It has been argued that writing in an L2 requires writers’ active regulation of cognition, metacognition, behaviour and motivation to sustain their effort in the writing process (Silver, 1993). In other words, successful writers need to use a variety of motivational regulation strategies to “have positive feelings, interest and self-initiated thoughts that would lead [them] to attain various literary goals, such as improving their writing skills and the quality of the text they create” (Boscolo & Hidi, 2007, p. 8). Although previous studies (e.g., Wolters, 2003; Zimmerman & Schunk, 2008) have found that the use of motivational regulation strategies helps students actively devote themselves to initiating, sustaining and increasing their willingness or effort to complete a task in general educational settings, not enough attention has been given to exploring motivational regulation strategies in L2 writing and relevant literature is scarce.

3.4.1 Research on writing motivation in China

Motivation research in China has proliferated during the last two decades. The bulk of studies has explored the internal structure of motivation (X. Qin & Wen, 2002), reclassified the subcategories of motivation (Y. Gao, Zhao, Cheng, & Zhou, 2003) and evaluated how motivational beliefs influence learners' effort exertion, strategy use and language achievement (Ma & Wen, 1999; Ma, 2005). These studies have found that motivational factors play an essential role in providing the driving force to sustain effort and improve L2 achievement. These findings also support the claim that L2 motivation is a multi-faceted structure in a dynamic process under the influence of many factors such as cognition, affect and social contexts (Dörnyei & Ushioda, 2013). While a substantial body of research has explored the essential role of motivation in an L2, some researchers (e.g., K. Li, 2009; Teng & Zhang, 2016a) also call for more attention to encouraging students to actively use different strategies to increase their motivation in the learning process. Such active motivational regulation plays an essential role in Chinese contexts, where learning to write in English is widely considered as the most challenging task for many EFL learners. Qin (2009) pointed out that most university students in China had low motivation, little intrinsic interest in learning to write and less confidence in the writing process. Scholars (e.g., Teng & Zhang, 2016b) in this area also found that Chinese students lacked sufficient knowledge of strategies or they did not receive enough instruction in how to use different writing strategies or motivational regulation. Although the essential role of motivational regulation strategies has been acknowledged in general learning environments (e.g., Zimmerman & Schunk, 2008), it is still unclear what strategies Chinese students use in learning to write and how these strategies relate to the use of other SRL strategies and EFL writing performance. For instance, Li (2009) developed a questionnaire to explore motivational regulation strategies used by Chinese university students in the process of learning English. Through an exploratory factor analysis (EFA), he found that the students reported using different motivational regulation strategies (e.g., performance and mastery self-talk, interest, task value, self-efficacy enhancement, self-reward, volitional control and negative-based incentive) to varying degrees. He also found that gender was a significant factor distinguishing students' use of motivational regulation strategies. Although Li made an initial attempt to explore motivational regulation strategies in

China, his research only focused on general learning environments without reference to a specific English skill, such as writing. It is apparent that research on motivational regulation strategies is still at an early stage in China, which needs more empirical elaboration.

Collectively considered, the empirical evidence discussed earlier attests to the importance of motivational beliefs in affecting learners' behaviour, effort giving, use of strategies and academic achievement. In addition, motivational regulation as an essential component of the SRL mechanism deserves more empirical elaboration with an aim to foster active writers. This study postulates that exploring a self-regulated learning model that includes multiple dimensions of SRL strategies (e.g., motivational regulation, cognitive and metacognitive strategies) and motivational beliefs would extricate the complex structure of writing processes, which contributes to fostering active and efficient learners.

3.5 Self-Efficacy and Writing

Self-efficacy, as an essential construct in the field of psychology and sociology, is defined as "people's judgment of their capabilities to organise and execute courses of action required to attain designated types of performance" (Bandura, 1986, p. 391). As a main determinant of self-regulation theory, self-efficacy determines the capability to use SRL strategies, to participate in motivational activities and to improve academic performance (Bandura, 1986). Numerous studies (e.g., Caprara et al., 2008; C. Wang, Kim, Bong, & Ahn, 2013; Pajares, 2003; Pajares & Valiante, 2001; Razmjoo & Hoomanfar, 2012; Schunk & Zimmerman, 2007; Usher & Pajares, 2008) have examined the relationships of self-efficacy beliefs with goal setting, motivation, attribution, learning strategies and academic achievements in a variety of learning environments (e.g., education, psychology and L1 writing) and among individual and social differences (e.g., age, gender and grade). These findings have shown that high perceived self-efficacy was often related to positive outcomes such as setting challenging goals, strong commitment to learning; paying more effort, active use of a wide range of strategies to learn and greater persistence and interest in academic performance and achievement.

Self-efficacy beliefs play an essential role in learning and SRL processes, particularly in writing contexts (Pajares, 2003; 2007) because the composing process not only requires students' sufficient writing and linguistic knowledge but also confidence in their competence "to manage the anxieties and emotions that can accompany writing" (Bruning, Dempsey, Kauffman, McKim, & Zumbunn, 2013, p. 29). In other words, with positive self-efficacy beliefs, students can adapt to the rapidly evolving demands of the writing tasks, actively use different strategies to sustain their learning and increase their emotional readiness to learn, which might in turn contribute to their positive learning outcomes. Pajares (2007) also posited that students' judgments of confidence in their ability played an essential role in successfully "[performing] grammar, usage, composition, and mechanical writing skills, such as correctly punctuating a one page passage or organizing sentences into paragraph to clearly express a theme" (p. 240).

3.5.1 Measuring writing self-efficacy

Research on self-efficacy beliefs in writing contexts can be traced back to the mid-1980s, with exponential development focusing on assessing self-efficacy in mechanical writing skills (e.g., confidence in their ability to successfully perform grammar, usage, composition and mechanical writing skills) and writing tasks (e.g., writing a story, fiction or a letter to a friend) (see Bruning et al., 2013, for a review). Informed by Bandura's research (1986), Shell, Murphy and Bruning (1989) made an initial attempt to investigate the interrelationships among self-efficacy, outcome expectancy beliefs and achievement in L1 reading and writing. Findings collected from undergraduate students through a regression analysis revealed that self-efficacy and outcome expectancy beliefs jointly accounted for significant variance in reading achievement, with self-efficacy being the stronger predictor. In addition, self-efficacy in writing skills alone significantly predicted writing achievement while writing task self-efficacy did not. No significant correlation between the students' perceived usefulness of writing and their essay scores was found. In a subsequent study, Shell, Colvin and Bruning (1995) adapted the instrument to fit young participants in fourth, seventh and tenth grades to explore how grade and achievement differences affected writing self-efficacy. They found that only writing skill self-efficacy significantly predicted writing

performance in all the three grade levels while writing task self-efficacy did not. Only writing task self-efficacy had a significant increase with the grade level.

In line with some previous studies (e.g., Bandura, 1986; Shell et al., 1989, 1995), Pajares and Johnson (1994) found that writing skills predicted students' actual performance in composing essays, rather than writing task self-efficacy, mirroring Shell and his colleagues' research (1989, 1995). Pajares further extended the studies of writing self-efficacy, including social and psychological factors (e.g., gender and apprehension) (Pajares, 2007; Pajares & Valiante, 1997, 1999, 2001). For example, Pajares and Valiante (1999) collected data from students ranging from grade six to eight and investigated whether writing self-efficacy beliefs made an independent contribution to the prediction of their writing competence and how these beliefs related to grade levels and gender differences. In their research, writing self-efficacy was defined as "students' judgments of their confidence that they possess the various compositions, grammar, usage, and mechanical skills appropriate to their academic level" (Pajares & Valiante, 1999, p. 394). They devised the *Writing Self-Efficacy Scales (WSES)* to measure writing self-efficacy. The questionnaire was composed of ten items asking students "how sure they were that they could perform specific writing skills on a scale from 0 (no chance) to 100 (completely certain)". Pajares and Valiante's study also included self-efficacy for SRL scale as a separate measure that assessed students' judgement of their capability to use various SRL strategies. They found that writing self-efficacy, as a motivation construct, was the only significant predictor in a model including writing self-concept, previous apprehension, perceived value of writing, self-efficacy for self-regulation, previous writing achievement, grade level and gender. Year level was a significant factor influencing students' self-efficacy but no gender difference was found.

Another strand of writing self-efficacy research gave a primary impetus for assessing writing self-efficacy from SRL theory. A good deal of empirical research has found a significant relationship between self-efficacy and self-regulation (Caprara et al., 2008; Schunk & Zimmerman, 2007; Zimmerman & Bandura, 1994; Zimmerman & Kitsantas, 2007). For example, Zimmerman and Bandura (1994) made an initial attempt to devise a writing self-regulatory efficacy scale conceptualised in a self-report questionnaire to

examine students' perceived efficacy for academic attainment in the writing course and their perceived capability in relation to beliefs about personal efficacy to regulate writing activities. Path analysis revealed that students' perceived self-efficacy to manage their writing activities predicted their self-efficacy for academic achievement, which was related to personal goal setting. In addition, perceived academic self-efficacy affected the writing course grade directly and indirectly through its effects on personal goal setting.

As researchers are taking more heed of writing self-efficacy, criticism regarding the assessment of this construct has become more prominent. Bruning and his colleagues (2013) pointed out that “most writing self-efficacy measures, however, have broadly sampled writing related skills and tasks, making them less than ideal for yielding information about writers' self-efficacy for specific dimensions of writing” (p. 27). In addition, the findings elicited from these instruments might not be directly linked to “models of writing or to potentially writing-relevant psychological and language-related processes” (Bruning et al., 2013, p. 26). Under such circumstances, Bruning et al. (2013) developed a new questionnaire, the *Self-Efficacy for Writing Scale (SEWS)*, to explore underlying dimensions of writing self-efficacy. Conceptualised in idea translation (Hayes, 2012) and existing research (Zimmerman & Kitsantas, 2007), they proposed a three-factor structure of self-efficacy, which included writing ideation, writing convention and writing self-regulation. Data were collected from middle school students who enrolled in eighth grade English/Language Arts (ELA) classes. The multi-group confirmatory factor analysis (CFA) supported a multifactor model of writing self-efficacy. They also found that the three dimensions of self-efficacy were significantly related to students' liking writing, self-reported writing performance and state-wide writing assessment (SWA) scores.

3.5.2 Research on writing self-efficacy in China

For specific English tasks, self-efficacy beliefs become critical, particularly when writing tasks are demanding and motivation is low, which often happens among EFL students in China (Woodrow, 2011). For many Chinese students, writing in English is the most daunting task due to their insufficient writing knowledge, limited use of strategies for producing and organising text or lack of interest in writing. As a result,

these students frequently experience failure when they are faced with writing assignments, which might lead to self-doubt, negative expectations and anxieties (L. Yang & Gao, 2013). Furthermore, writing courses in EFL contexts are normally teacher-centred and exam-oriented, which might further impede students' active engagement with learning to write. In these circumstances, it is critical to increase EFL students' writing self-efficacy to complete specific learning tasks in classroom environments.

Although great progress has been made in assessing self-efficacy beliefs in an L1, research on L2 self-efficacy, particularly in EFL writing contexts in China, is still in its early stage. Some empirical studies on writing self-efficacy have intensively focused on how self-efficacy related to anxiety (e.g., H. Li, Liu, & Liu, 2013; Woodrow, 2011), writing proficiency (e.g., Tang & Xu, 2011) and writing strategies (e.g., H. Li, 2013). For instance, Woodrow (2011) applied structural equation modelling (SEM) to investigate the relationships of self-efficacy and anxiety among college English students in China. She found that self-efficacy was a powerful predictor of writing performance and such a significant relationship was informed by writing anxiety. This mediating effect of self-efficacy on the relationship of anxiety and writing performance was corroborated by Li et al.'s study (2013). Tang and Xu (2011) collected data from non-English major students in China through a self-report questionnaire and they found that both writing task self-efficacy and writing skill self-efficacy had a significant effect on students' writing performance. Li's (2013) study revealed that Chinese college students' writing self-efficacy and their use of writing strategies directly predicted writing performance. He also found that high-self-efficacious students tended to effectively deploy a wider range of writing strategies with better writing test scores than their lower counterparts.

On the whole, most studies so far have focused on the investigation of self-efficacy from the perspective of a unidimensional construct in educational psychology and L1/L2 settings. These observational studies have revealed that self-efficacy has a significant effect on learners' goal setting, effort giving, emotion (anxiety), motivational beliefs and academic performance. However, Bandura (2006) posited that self-efficacy scales "must be tailored to activity domains and assess the multifaceted

ways in which efficacy beliefs operate within the selected activity domain” (Bandura, 2006, p. 310). His argument suggests that self-efficacy is a specific-domain construct, which is possibly featured with multi-dimension facets. Despite Bruning et al.’s (2013) study corroborating the multi-faceted feature of self-efficacy, the instrument cannot be directly applied to L2 writing such as EFL writing in China. Given that writing is a complex, situated and multi-dimensional process (Roca de Larios et al., 2008), it is necessary to explore the underlying factors of L2 writing self-efficacy beliefs for cultivating confident and active learners.

3.6 Summary

This chapter initially presented the description of research on SRL strategies in writing contexts, which revealed the salient role of SRL strategies in improving writing achievement and fostering proactive learners. A thorough review of writing strategies in L2/EFL was presented with a focus on conceptualisation, evaluation and strategies-based writing instruction. Literature review has shown that a majority of studies on L2 writing strategies were observational. However, no sufficient attention has been given to strategies-based writing intervention in an L2 setting, particular in China. The last section introduced how motivational beliefs and self-efficacy influenced writing in L2 settings. This chapter ended by pointing out the necessity to investigate writing strategies, motivational beliefs and self-efficacy for developing efficient and active writers in EFL settings.

CHAPTER FOUR

THEORETICAL FRAMEWORKS

The previous literature revealed the importance of SRL strategies in promoting learners' academic development and pointed out the necessity to incorporate SRL theory into the exploration of LLSs in specific learning contexts, such as L2 writing. In order to provide a better understanding of theoretical rationales underlying the research design, this chapter aims to present a thorough elaboration of SRL and writing processes from both sociocognitive and sociocultural theoretical perspectives. This chapter starts with an introduction to sociocognitive and sociocultural theories and how the two paradigms reconcile together to present a clear comprehension of SRL in writing contexts. The following sections illustrate different writing models and present a thorough description of a multi-dimensional framework of SRL strategies in L2 writing.

4.1 Sociocognitive Theory and SRL

Sociocognitive theory regards learners as agents over themselves and their environments and they “draw on their knowledge and cognitive and behavioural skills to monitor their actions [and] enlist cognitive guides and self-incentives to produce desired results” (Bandura, 1989, p. 1181). It emphasises the “triadic reciprocity in which behaviour, cognitive and other personal factors, and environmental events all operate as interacting determinants of each other” (Bandura, 1986, p. 18). This comprehensive theory is widely used to explain how people acquire competencies, values, styles of behaviour and how people motivate and regulate their learning.

Based on Bandura's triadic analysis of human function (Bandura, 1986), sociocognitive accounts of SRL view learners as agents, whose learning behaviour is under the triadic and reciprocal influence of their past behaviours, personal variables (e.g., interest and self-efficacy) and environmental variables (e.g., task difference, instructional supports and conditions, social modelling and feedback) (Winne & Hadwin, 2010). In social cognitive models, SRL emphasises students' proactive engagement with learning and active management of their own motivations (Zimmerman, 2013). The construct is best featured as “an active, constructive process whereby learners set goals for their learning

and then attempt to monitor, regulate and control their cognition, motivation and behaviour” (Pintrich, Wolters, & Baxter, 2000, p. 453).

During the SRL process, vicarious learning is core and fundamental because “regulation is described as a developmental trajectory moving from observation, through emulation of others usually involving guided practice, to self-control, and finally to self-regulation” (Winne & Hadwin, 2010, p. 506). From a sociocognitive view, learning can be conducted by doing, called enactive learning, and by observing, called vicarious learning, which are influenced by individual, environmental and social variables (Schunk, 2001). The vicarious outcomes influence motivational factors via two cognitive mechanisms in terms of outcome expectation and perceived self-efficacy. The former may serve as positive or negative incentives for action and the latter may fuel learners’ effort in completing a task (Bandura, 1986). In addition, social cognitive views place particular emphasis on the role of socialising agents in the development of self-regulation, such as parents, teachers and peers (Boekaerts, Pintrich, & Zeidner, 2000). As Zimmerman (2000) explained, SRL includes “self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals”, which is facilitated by feedback from socialising agents (p. 14).

4.1.1 Sociocognitive models of SRL

Framed within the sociocognitive theory, two representative SRL models are presented to provide a clear demonstration of the working mechanism of the SRL process.

4.1.1.1 Cyclical process of SRL

Grounded in the sociocognitive theory, a cyclical, triadic model of SRL was proposed (Schunk, 2001; Zimmerman, 2000), including forethought, performance and self-reflection phases.

Figure 4.1: Cyclical Model of SRL

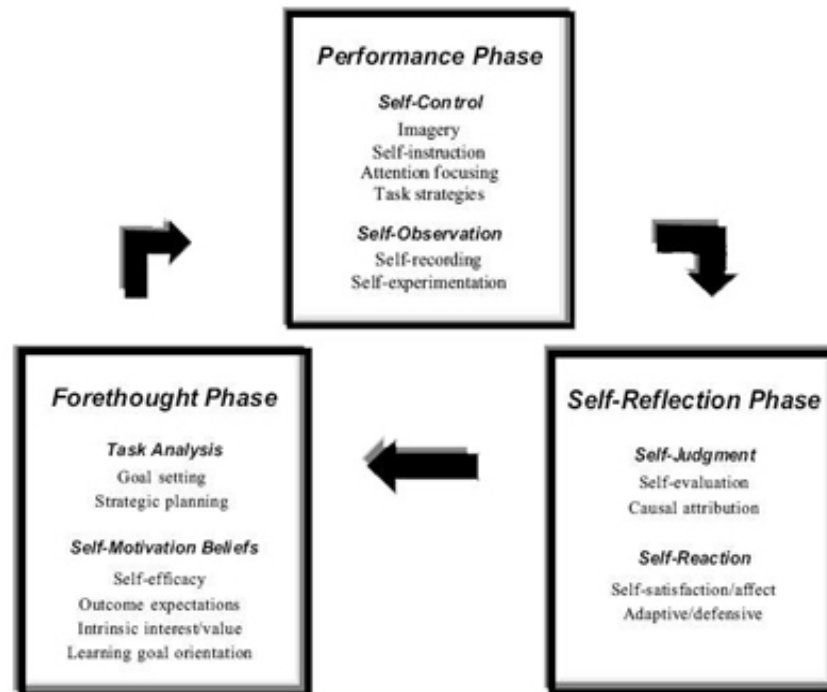


Figure 4.1. From B. J. Zimmerman & M. Campillo (2003), *Motivating self-regulated problem solvers*. In J. E. Davidson & R. J. Sternberg (Eds.), *The nature of problem solving* (p. 239). New York: Cambridge University Press.

As shown in Figure 4.1, the forethought phase comprises two major metacognitive forms: task analysis and self-motivation beliefs. The implementation of task analysis includes goal setting and strategic planning under the influence of motivational beliefs, such as self-efficacy, outcome experiences, task interest/value and goal orientation. The performance or volitional control phase includes self-control and self-observation. It refers to the processes in which learners exert their efforts to optimise their performance. The self-reflection phase entails two key factors: self-judgment and self-reaction. Self-judgment means that a learner self-evaluates his or her performance through comparison with a standard or goal, and ascribes causal meaning to the results. The self-reflection phase provides feedback, which mediates task analysis and self-

motivation beliefs in the forethought phase. Based on the self-reflection, learners adjust their learning strategies, goals and affects.

This model emphasises the essential role of learners' feedback loops mediating the use and adjustment of strategies under the influence of cognition, social environment and individual differences (Zimmerman, 2000). Feedback in this cyclical process “[enables] learners to seek assistance when it is needed, [expend] effort and persist, [adjust] strategies, and [set] new goals when present ones are attained” (Zimmerman & Schunk, 2011, p. 1). The cyclical nature of this model reveals the magnitude of motivation, goals and feedback under the influence of the cognition and social environments (Zimmerman, 2011).

4.1.1.2 Winne and Hadwin's SRL model

Winne and Hadwin (1998) proposed a recursive model of SRL, which emphasises the essential function of self-regulation control and monitoring under the influence of motivation, knowledge and strategies. It is composed of four phases as shown in Figure 4.2.

Phase 1. Defining the task

In the first phase, learners generate their perception of tasks in a context of affordances and constraints, both internal (e.g., strategies available, limited capacity, topic knowledge and motivation) and external (e.g., time available and help-seeking). The definition of a task is metacognitively monitored relative to standards, and metacognitive control is also exercised “if [learners] search for more information when a task's parameters are fuzzy and they deem it worth the effort to clarify them” (Winne & Perry, 2000, p. 21).

Phase 2. Setting goals and plans

In this stage, “learners intensely [engage] in weighing the utility of different options for goals and for plans about cognition they predict can achieve them” (Winne, 2011, p. 21). Cognition refers to “decision making, supplemented by information retrieved from

memory, to frame goals and assemble a plan for approaching them” (Winne & Perry, 2000, p. 539).

Figure 4.2: Winne and Hadwin’s SRL Model

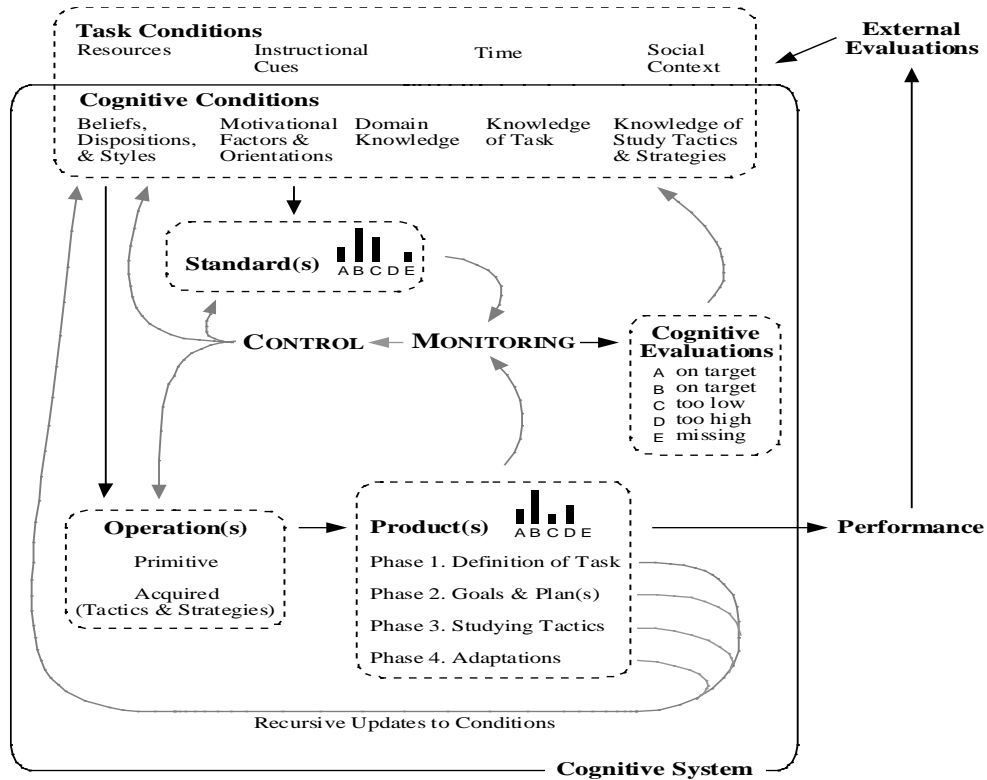


Figure 4.2. A four-stage model of self-regulated learning. From Winne, P. H., & Hadwin, A. F. (1998). Studying as self-regulated learning. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), *Metacognition in educational theory and practice*. Hillsdale, NJ: Erlbaum.

Phase 3. Engagement/enacting tactics

In this phase, learners identify tactics and strategies and construct cognitive and behavioural products. As Winne (2011) explained, “as work progresses, a metacognitively active learner interleaves cognition applied to the task with metacognition” (p. 21)

Phase 4. Large-scale adaptation/adapting metacognition

The four phase of the model recognises the essential role of task goals and metacognitive regulation that includes metacognitive monitoring and metacognitive control (Winne & Perry, 2000). In other words, directed by specific goals, learners have opportunities to “metacognitively monitor properties of information, declarative and procedural knowledge, and their cognitive experience” (Winne, 2011, p. 21) to realise the self-regulating process. In addition, the metacognitive regulation is also facilitated by feedback from each phase and learners may adjust their learning engagement based on the feedback when they exercise the metacognitive control.

In this project, Zimmerman’s cyclical model and Winne and Hadwin’s model of SRL were reconciled as the theoretical base, in which metacognition, motivation, self-efficacy and feedback loops as salient components of SRL were thoroughly examined in the ensuing parts. The reconciliation of the two models reflects multidimensional facets of the SRL structure, which contributes to developing a better understanding of the self-regulating mechanism in L2 writing.

4.1.2 Metacognition in SRL

Metacognition is often simply defined as the thought about cognition and broadly defined as awareness and control of one’s cognition or products of cognition (Flavell, 1979). It probes into intangible mental processes of human beings and usually involves monitoring and choosing among tactics and strategies (Winne & Hadwin, 2010). In the real learning process, metacognition can be “the awareness learners have about their general academic strengths and weaknesses, cognitive resources they can apply to meet the demands of particular tasks, and their knowledge about how to regulate engagement in tasks to optimize learning processes and outcomes” (Winne & Perry, 2000, p. 533). Flavell (1979) pointed out that metacognition entailed cognition and knowledge of person, task and strategy, while Brown and his colleague (Baker & Brown, 1984) postulated metacognition as the executive control of cognition typically materialised through the regulatory activities of problem-solving strategies, such as planning, monitoring, revising and evaluating.

Metacognition has essential parts: metacognitive knowledge and metacognitive strategies. Metacognitive knowledge refers to the information learners acquire about

their learning, which represents the trait nature of metacognition (Wenden, 1998; White, 1999). Researchers and theorists have identified three typical distinctions of metacognitive knowledge: declarative knowledge, procedural knowledge and conditional knowledge. These three aspects of metacognitive knowledge reflect what learners know (declarative knowledge), how to apply (procedural knowledge) and in which conditions to apply (conditional knowledge) their metacognitive knowledge. Metacognitive strategies reflect the state nature of metacognition in a particular setting, which normally include a triadic classification: planning, monitoring and evaluating. According to Gao (2007), metacognition is a good channel to explore learners' perception, performance of completing a task and the use of LLSs in the language learning process. Zhang (2010) has argued that metacognition plays an important role in "planning and executing learning development programs" related to learning strategy research (p. 320). There is a growing recognition that metacognition is strongly linked to the development of language proficiency and cognitive maturity (Pintrich, Wolters, & Baxter, 2000; Wenden, 1998). Some studies have empirically demonstrated that metacognitive knowledge and strategies promote learning outcomes as well as cognitive development (White, 1999; Winne, 2011; Woodrow, 2005; X. Gao & Zhang, 2011; Zhang, 2010). Zhang and Zhang (2013) argued for understanding metacognition as a set of dynamic systems because the empirical findings (see Zhang, 2010) have verified a strong relationship between metacognitive knowledge, metacognitive strategies and successful EFL reading comprehension.

4.1.3 Motivation in SRL

Motivation in this study is seen as a social and educational activity in the context of L2 learning. Motivation refers to "what moves a person to make certain choices, to engage in action, to expend effort and persist in action" (Dörnyei & Ushioda, 2011, p. 3). Given the diverse understanding and classification of motivation in different conceptual frameworks (see Dörnyei & Ushioda, 2011, for a review), this study operationalises motivation from a cognitive perspective, which regards motivation as people's choice of "what experience or goals they will approach or avoid, and the degree of effort they will exert in that respect" (Keller, 1983, p. 389). Motivation is influenced by learners' sense of agency and feelings of mastery and control over the learning activity and their

interest in it (Noels, Pelletier, Clément, & Vallerand, 2000). Motivational factors interact with cognitive, behavioural and contextual variables in SRL models, and they play a core role in regulating learners' efforts to learn. Motivational variables can serve as “precursors, mediators, and concomitant outcomes of SRL” (Schunk & Zimmerman, 2008, p. 5). Dörnyei (2005) pointed out that people become highly motivated when they “are competent, have sufficient autonomy, set worthwhile goals, get feedback, or are affirmed by others” (p. 18).

4.1.3.1 Motivation theories and the subcomponents

Given that there are different theories exploring the complexity of human motivation in contemporary research (Dörnyei & Ushioda, 2013; Oxford & Shearin, 1994), the following section presents the two most influential theories that include expectancy-value theories and goal orientation from self-determination theory in a focal paradigm of motivational psychology.

Expectancy-value theories

As the most influential conceptualisation in motivational psychology, expectancy-value theories hold a belief that “humans are innately active learners with an inborn curiosity and an urge to get to know their environment and meet challenges” (Dörnyei, 2005, p. 20). Expectancy “refers to students' beliefs that they can accomplish a task” (Pintrich, Smith, Garcia, & McKeachie, 1993, p. 802). The value component includes students' goals and beliefs about their ability to perform a task (e.g., how interesting, useful and important the course content is to the student). It emphasises “the reasons why students engage in an academic task” (Pintrich et al., 1993, p. 802).

Goal-orientation theory

Goal-orientation is derived from self-determination theory (Deci & Ryan, 1985) and is currently becoming the most active area of research on student motivation in the classroom environment (Schunk et al., 2008). This theory highlights two different achievement goal orientations known as performance and mastery orientation, which “represent different success criteria and different reasons for engaging in achievement activity” (Dörnyei, 2005, p. 27). This line of enquiry from the goal perspective has been

widely applied in SRL research, revealing the essential role of goals in selection of learning strategies and effort giving (Pintrich, 2004; Zimmerman, 2011).

In general, goal-oriented motivation is composed of the theoretical dichotomy of mastery and performance goals with an approach-avoidance dimension (Pintrich, 2000), which refers to learners setting goals so as to either aim towards positive outcomes (approach) or to prevent negative consequences (avoidance). Ames (1992) has posited that mastery goals are superior to performance goals in the learning process because believing in one's own effort leading to success will generate a strong impetus for learners to face challenges in a task, show more interest in learning activities and develop positive attitudes towards learning. Previous research has found that mastery-approach goals had positive correlation with cognitive processing strategies, task value, interest, and self-efficacy but stood in a negative relation to effective processing strategies (e.g., Pintrich & Zusho, 2002). In contrast, research on performance goals yielded conflicting results. Some researchers found that performance goals had a positive relation to self-efficacy, cognitive strategies, processing strategies and motivational regulation strategies (e.g., Midgley, Kaplan, & Middleton, 2001), while others did not find a relation between performance goals and cognitive strategies (e.g., Wolters, 2004). Pintrich (2004) investigated the role of affect in self-regulation and found a positive relation between approach mastery goals and positive emotions.

Pintrich and his colleagues (1990, 2000) classified goal motivation into intrinsic goal orientation (focus on learning and mastery of knowledge) and extrinsic goal orientation (grades and approval of others), which are similar to the previous performance and mastery taxonomies. Intrinsic goal orientation refers to “a state in which learners are willing to learn a subject matter or target skills for different reasons such as interest in the content, a wish to improve knowledge or skills, or a desire to feel sense of achievement” for challenge, curiosity and mastery (Pintrich et al., 1991). Previous studies have shown that intrinsic goal orientation is related to many types of academic outcomes such as improved self-efficacy and active use of self-regulatory strategies (Pintrich, 2004; Pintrich et al., 1993). Extrinsic goal orientation refers to a state “in which learners are driven to learn based on external reward such as obtaining a reward, getting a good grade, or avoiding situations that are likely to threaten their ego”

(Pintrich, 1991, p. 14). Some researchers (e.g., Noels et al., 2000) have pointed out that intrinsic and extrinsic goal orientations are important predictors of English learning outcomes. According to Pintrich et al. (1991), intrinsic goal orientation is seen as being crucial for the development of competence and self-determination. As Deci and Ryan (1985) argued, human beings naturally look for what evokes their interest and attempt to overcome the challenges they encounter, and that these drive and promote a self-initiated or self-determined behaviour.

4.1.3.2 Motivational regulation in SRL

As a key construct of SRL models, motivational regulation serves as “precursors, mediators, and concomitant outcomes of SRL” (Schunk & Zimmerman, 2008, p. 5), contributing to the development of strategic and effective learning. Within SRL theory, motivational regulation strategies are referred to as “various actions or tactics that students use to maintain or increase their effort or persistence [in a] particular academic task” (Wolters, 1999, p. 283). There is a growing recognition that insight into the function of motivational regulation strategies would foster a better understanding of active learning in academic contexts (Dörnyei, 2001; Wolters & Mueller, 2010; Zimmerman & Schunk, 2008). Previous studies, albeit limited, have found that motivational regulation strategies interact with cognitive, behavioural and contextual variables in SRL models and they therefore play a mediating role in influencing students’ choice, effort, cognitive engagement and academic performance in educational contexts, such as psychology, maths, science and L1 English (e.g., Cooper & Corpus, 2009; Schwinger et al., 2009; Wolters, 1998; Wolters & Bizon, 2013). Informed by SRL theory, motivation regulation is regarded as a dynamic construct embracing multiple dimensions contextualised in different learning environments (Dörnyei, 2001; Schunk & Zimmerman, 2008). Many researchers therefore have examined students’ use of different motivational regulation strategies with a focus on five essential subcategories, namely mastery self-talk and performance self-talk, interest enhancement, emotional control and environment structuring, which are essential to students’ cognitive and metacognitive engagement and academic achievement (see Wolters & Bizon, 2013, for a review).

Motivational self-talk

Motivational self-talk refer to students' using self-reinforcing verbal statements to achieve various goals while they are engaged in an academic activity (Schunk & Zimmerman, 2008). It includes mastery self-talk and performance self-talk. Performance self-talk refers to strategies that students use for external reasons such as "thinking about getting high grades, doing better than others, or showing one's innate ability or other performance-approach goals as a way of convincing themselves to continue working" (Wolters, 2003, p. 195). Mastery self-talk includes students offering internal reasons to sustain their learning effort for the sake of "satisfying their curiosity, becoming more competent or knowledgeable about a topic, or increasing their feelings of autonomy" (Wolters, 2003, p. 195). Previous studies (e.g., Wolters, 1998, 1999) have found significant effects of those goal-oriented motivational regulation strategies on the use of cognitive and metacognitive learning strategies, effort giving and academic performance.

Interest enhancement

Interest enhancement refers to strategies that individuals use to increase their situational enjoyment when completing a task (Sansone et al., 1992). According to Sansone and Thoman (2005), interest under the motivational regulation construct is "a dynamic state that arises through an ongoing transaction among individuals' goal, activity characteristics, and the surrounding context" (pp. 175–176). Some empirical studies have shown that the use of interest enhancement strategies contributes to students' paying greater efforts to academic tasks (e.g., Pintrich & De Groot, 1990; Sansone et al., 1992).

Emotional control and environment structuring

Emotional control and environment structuring are categorised into the conception of volitional control (Kuhl, 1984), which refers to the alteration of one's mental condition and physical environments in order to "avoid or reduce distractions and, therefore, facilitate continued task engagement" (Cooper & Corpus, 2009, p. 525). Emotional control refers to students' ability to regulate their emotional reactions to sustain their learning effort in completing academic tasks (Wolters, 2003). The intrinsic regulation of emotion plays an essential role in "reducing negative affective response and

deleterious effects associated with performance evaluations” (Wolters, 2003, p. 199). Environment structuring involves “students’ efforts to concentrate attention, to reduce distractions in their environment, or more generally, to arrange their surroundings to make completing a task easier or more likely to occur without interruption” (Wolters & Rosenthal, 2000, p. 803). However, there is a little empirical evidence connecting the regulation of environment with students’ efforts, persistence and academic performance (e.g., Wolters, 1998, 1999; Zimmerman & Martinez-Pons, 1986).

Collectively considered, the empirical evidence discussed earlier attests to the importance of motivational regulation in the SRL mechanism in educational settings, whereas these findings have not yet been validated in other contexts, such as EFL writing. I postulate that an empirical examination of motivational regulation might render sufficient evidence for transferring educational theory to the field of EFL teaching and learning. I also envisage that findings of this study would make a contribution to promoting students’ active motivational regulation in learning to write which, in turn, helps to foster self-regulated learners.

4.1.4 Self-efficacy in SRL

Self-efficacy refer to people’s judgment of their abilities to organise and execute courses of action required to attain designed types of goals (Bandura, 1997). Social cognitive theory sees self-efficacy as developing with cognitive capabilities and “self-efficacy judgment increasingly supplants external guidance”, which finally realises the self-regulatory process (Bandura, 1986, p. 414). According to Zimmerman and Schunk (2008), perceived self-efficacy is “the judgement of the ultimate outcomes of one’s action” under the influence of different social and psychological variables (p. 10). This contention resonates with Bandura’s (1997) argument that self-efficacy is the foundation of human motivation, performance accomplishments and emotional well-being. Bandura (1977) has claimed that self-efficacy is not a fixed attribute in one’s repertoire but a generative capability in which cognitive, motivational, emotional and behavioural skills must be organised and effectively orchestrated to serve diverse purposes. Many researchers (e.g., Pajares & Urdan, 2006; Schunk & Pajares, 2010) have found that people with a high sense of self-efficacy approach difficult tasks as challenges to be mastered rather than as threats to be avoided. They have greater

intrinsic interests and deep engrossment in activities, set themselves challenging goals and maintain strong commitment to them. Conversely, those with a low sense of self-efficacy tend to believe that things are tougher than they really are, which will foster stress, depression and a narrow vision in problem solving (Pajares & Urdan, 2006). Previous research has collectively testified to the essential role of self-efficacy in students' academic achievements and commitment (e.g., Caprara et al., 2008; Chemers et al., 2001; Pajares, 2003; 2008; Razmjoo & Hoomanfar, 2012; Schunk & Zimmerman, 2007).

Within an SRL framework, perceived self-efficacy is regarded as a capacity to regulate one's thoughts, motivation, affect and action through self-reactive influence, which constitutes one of the core properties of human agency. According to Schunk and Ertmer (2000), self-efficacy plays a continuous role throughout Zimmerman's three-phase recursive model of self-regulation. Table 4.1 shows self-efficacy in the SRL process (Schunk & Ertmer, 2000, p. 634).

Table 4.1 Self-efficacy in the Self-regulation Process

Forethought (pre-task)	Performance (during task)	Self-reflection (post-task)
<ul style="list-style-type: none"> • Self-efficacy • Goals • Outcome expectations • Perceived value 	<ul style="list-style-type: none"> • Self-efficacy • Self-monitoring • Self-perceptions of progress • Strategy use • Motivation 	<ul style="list-style-type: none"> • Self-efficacy • Goals • Self-evaluations • Adaptations of self-regulatory processes

Schunk and Ertmer (2000) stated that

skillful self-regulators enter learning situations with specific goals and a strong sense of self-efficacy for attaining them. As they work on tasks, they monitor their performance and compare their attainments with their goals to determine progress. Self-perceptions of progress enhance self-efficacy, motivation, and continued use of effective strategies. During the periods of

self-reflection they evaluate their progress and decide whether adaptations in self-regulatory processes are necessary. (p. 634)

This model reveals that self-efficacy is a dynamic construct interacting with different variables (e.g., use of strategies, persistence in a task, goals and motivation) in the self-regulating process, which in turn impacts learners' academic success. There has been an increasing recognition that self-efficacy determines to what degrees learners devote their resources to a specific task (Pajares, 2008). In addition, self-efficacy is also closely related to intrinsic motivation. Successfully overcoming the difficulties learners encounter when completing a task often results in enhanced self-efficacy (Schunk & Ertmer, 2000).

4.1.5 Feedback in SRL

Based on the triadic model of SRL (Zimmerman, 2000), feedback loops play a core role in regulating processes. As Zimmerman and Risemberg (1997) explained, self-regulation “[interacts] reciprocally via a cyclic feedback loop through which writers self-monitor and self-react to feedback about the effectiveness of specific self-regulatory techniques or processes” (p. 73). Winne and Hadwin (2010) have posited that SRL is developed with the assistance of “observing models, trying out the behaviour, and receiving feedback from others” (p. 507). Within the feedback loops, learners monitor, evaluate and adjust strategies, goals and motivational factors when completing a given task (Zimmerman & Schunk, 2011). Previous studies have found that “when learners face challenging tasks for which their current tactics and strategies are not sufficient for success, performance in the long run can be improved by providing feedback about processes in the short run” (Winne & Hadwin, 2010, p. 507).

Writing is a highly cognitive activity and it is influenced by writers' existing knowledge and skills, affective factors and social environments (Hayes, 2012; Silva & Matsuda, 2010). This means effective feedback from teachers and peers helps learners to be more active or motivated in their own learning. Some studies have found that feedback from teachers and peers is beneficial for learners to improve their motivation, academic achievement and SRL capabilities (Bown, 2009; Butler & Winne, 1995; Schunk & Rice, 1986).

4.2 Sociocultural Theory and SRL

Sociocultural theory emphasises the “dialectic understanding of human consciousness and mental development” (Lantolf & Poehner, 2008, p. 6). It postulates “social interactions and participation as central in enculturating learners into the practices of their learning communities” (Winne & Hadwin, 2010, p. 503). Informed by sociocultural theory, Vygotsky (1978), along with other researchers (Lantolf & Poehner, 2008), have interpreted the development of cognitive processes from social relations into mental functions through mediated learning. This line of understanding seeks to explain “how culturally and historically situated meanings are constructed, reconstructed, and transformed through social mediation” (Englert, Mariage, & Dunsmore, 2006, p. 209). Sociocultural theory contends that “(a) learning is constructed, rather than reproduced and (b) learning is a social, cultural, and interpersonal, as well as intrapersonal, process” (Bown, 2009, p. 571).

A thorough discussion of sociocultural theory is beyond the scope of this chapter. Instead, this part introduces the three essential components of sociocultural theory, which are mediation, zone of proximal development (ZPD) and scaffolding. These three aspects have been proven salient in fostering SRL in writing contexts (Lantolf & Poehner, 2008).

Vygotsky’s conception of mediation is considered as a dynamic interaction between a learner and more capable others. ZPD focuses on what an individual can accomplish when working with or without capable others and the individual’s learning potential in the future (Zuengler & Miller, 2006). It is defined as:

the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (Vygotsky, 1978, p. 86)

ZPD represents the difference between a learner’s performance with or without assistance and mediation can help learners move through their zone of proximal development in the learning process (Oxford, 2003). Scaffolding is a third dimension of

sociocognitive theory, interacting with the other two components of mediation and ZPD. Scaffolding is regarded as “the dynamic interaction between a learner and another in which kind and degree of support is carefully matched to the goal of learning and the learner’s current level of mastery relative to that goal” (Winne & Hadwin, 2010, p. 503). There has been recognition that effective medication is achieved through scaffolding from people around learners (Donato & MacCormick, 1994). According to Winne and Hadwin (2010), effective scaffolding helps learners “gradually [assume] full regulatory control of cognition, metacognition, motivation, and behaviour” (p. 507).

Along with the development of research on developing strategic learners, many researchers have realised that the sociocognitive perspective of learning could not provide a holistic picture for depicting the learning process. The necessity of conceptualising learning from sociocultural theory is brought into prominence when researchers endeavour to explain the role of social and contextual influences on SRL. Informed by Vygotsky’s notion of sociocultural theory, SRL is regarded as a culturally rooted, socially mediated process “wherein students learn to internalize language, signs and activities existing first in the sociocultural practices of their communities” (Winne & Hadwin, 2010, p. 506). From a sociocultural perspective, the self-regulating process draws on the development of human capacity through the dynamic interaction of social settings, cognition and language development (Lantolf & Poehner, 2008; Oxford, 2013). From a sociocultural perspective, SRL encompasses learners’ psychological processes (e.g., analysing, synthesising, planning, monitoring and evaluating) through interaction with the more capable others (Donato & McCormick, 1994; Oxford & Schramm, 2007). These internalised processes can eventually “become the learner’s own inner speech, which provides ongoing guidance to the learner and is the basis of self-regulation” (Oxford et al., 2014, p. 32).

4.2.1 SRL from a sociocultural perspective

Compared with sociocognitive theory, a sociocultural perspective shifts the focus of the development of SRL from self- to co-regulation. Sociocultural theory regards the regulating process as being coordinated and negotiated with social contexts and supported by more capable others (e.g., peers or teachers) (Winne & Hadwin, 2010). Co-regulation in sociocultural theory is “an interactive process whereby ownership of

self-regulatory activity and thinking is first shared among participants, then gradually taken up or appropriated by the individual learner” (Oxford, 2003, p. 86). This form of co-regulation is a central transitional process in a learner’s development of more productive SRL. Winne and Hadwin (2010) summarised the co-regulation process as:

During coregulation, students and teacher regulate together, sharing thinking and decision making and developing a shared or intersubjective task environment where each brings expertise and control to the task. Slowly, as knowledge and control are transferred to the learner, self-regulation emerges and students begin to develop realistic self-evaluations. Hence, this process is referred to as emergent interaction. Finally, the student independently engages behaviours, actions, and thinking associated with SRL. (p. 507)

The above explanation reveals the three central aspects of the co-regulation concept in the self-regulating process, which includes “the relationships among individuals, objects, and settings”; “coordinating and negotiating social contexts as well as self and social expectations and goals”; and instructional supports which provide “opportunities for learners to experiment with and learn motivation as well as strategies and self-evaluations” (Winne & Hadwin, 2010, p. 507). In addition, many researchers (Lantolf & Poehner, 2008; Vygotsky, 1978) have concurred with the essential role of scaffolding in the co-regulating process because it helps students progress to master a high level of knowledge within their ZPD. It is apparent that sociocultural theory unravels another perspective to exploit SRL with a focus on social interaction, which has recently acquired much attention in the fields of educational psychology and language learning (X. Gao & Zhang, 2011; Oxford & Schramm, 2007).

4.2.2 Sociocultural theory and writing

With the development of writing research, many researchers have realised that cognitive frameworks of writing are insufficient to reveal the dynamic, recursive and complex nature of writing. The variability and multi-faceted nature of writing constrains a comprehensive view of learning to write that might unequivocally inform teaching (Cumming, 2001). Therefore, a sociocultural perspective provides a new lens to exploit writing processes at “the intersection of individuals, culture, and activity”

(Englert et al., 2006, p. 208). Viewing humans as full agents of their activities, a Vygotskian perspective on writing attempts to account for “how writing has become socially constructed in different cultural groups through attending to four genetic developments sociohistorically, including phylogenetically as human species evolve over time, sociogenetically over the lifespan of an individual, and microgenetically as individuals interact with others on a moment-to-moment basis in activity settings” (Englert et al., 2006, p. 218). Sociocultural advocates have argued that writing is a socially rooted process, in which mediation plays a salient role in fostering self-regulated learners and increasing writing competence (Lantolf & Poehner, 2008). According to Oxford (2003), the exploration of mediation in the composing process reveals a dialectical relationship between humans and society and culture. Cumming (2001) posited that “these various types of situated interactions, if pitched appropriately and meaningfully at learners’ zones of proximal development, can help in diverse ways to scaffold people’s acquisition of text forms, composing processes, and purposeful social interactions through writing in the second language” (p. 9).

4.2.3 Sociocultural theory and LLSs

According to Donato and MacCormick (1994), sociocultural theory maintains that “emergence of strategies is a process directly connected to the practices of cultural groups through which novices develop into competent members of these communities” (p. 453). LLS research from sociocultural theory aims to achieve a “balanced theorization of agency and context in relation to their explanatory roles in understanding learners’ strategy use” (Donato & MacCormick, 1994, p. 462). Many researchers (e.g., Dabarera, Renandya, & Zhang, 2014; Donato & MacCormick, 1994; Lantolf, 2000; Oxford & Schramm, 2007; X. Gao, 2006) have applied sociocultural theory to the investigation of learning strategies in second and foreign language learning with fruitful results. Oxford (2011) has delineated a range of sociocultural-interactive strategies for language learning, and her recent research has revealed that these social strategies “help learners obtain help, collaborate with others, transcend knowledge gaps when communicating with others, and deal with learning-related issues of identity and culture” (Oxford et al., 2014, p. 32). Some writing scholars also integrated sociocultural aspects into describing writing strategies or implementing

strategies-based writing instruction of L2 contexts with a focus on mediation, scaffolding and ZPD (e.g., De Guerrero & Villamil, 2000; Lei, 2008; Steendam, Rijlaarsdan, & Bergh, 2014; Yu & Lee, 2015).

Having acknowledged the essential role of the two theories, this study argues for a synergy of sociocognitive theory and sociocultural theory to understand SRL in writing contexts. Given the complex nature of L2 writing, a sociocognitive view accounts for how learners as agents control and develop their own proactive engagement in learning processes under the triadic and reciprocal influence of their past behaviours, personal variables and environments. So far, there is a growing recognition that self-regulation is a culturally rooted, socially mediated process, revealing that the way to the development of self-regulation is under the influence of self, social factors and cultural background. As Englert et al. (2006) pointed out, incorporating sociocultural factors into L2 strategy instruction contributes to enriching the content and usefulness of a comprehensive L2 writing model. Therefore, this study adopts sociocognitive theory as an instructional model and sociocultural theory as an interpretive lens to unravel the complex and multidimensional structure of L2 writing, as argued by many LLS researchers (e.g., Oxford & Schramm, 2008). From a sociocognitive perspective of SRL, this study explores how learners developed their SRL process in reciprocal interaction with external and internal variables (e.g., feedback, motivation and self-efficacy). From a sociocultural perspective, this study also investigates how the co-regulation process in the form of mediation and scaffolding provides a lens for interpreting the results of strategies-based instruction. The reconciliation of the two theoretical paradigms is expected to develop a better understanding of the characteristic features of the L2 writers' strategic behaviour.

4.3 Writing Models

In order to better understand the nature of writing, this section presents a brief account of different writing models and explores how these models relate to SRL processes.

Grounded in cognitive psychology, Hayes and Flower (1980), as eminent researchers, proposed a process-based writing model. This cognitive writing model emphasises writers' own abilities and consciousness to monitor and adjust their writing processes.

Their model includes the interplay of cognitive writing processes (planning, translating, and revision), the task environment and the long-term memory. It is best characterised as an individual-centred, process-oriented and goal-directed model, reflecting a leap from traditional linear explanations to multi-level demonstration of the complexity of cognitive processes involved in composing (see Figure 4.3).

Figure 4.3: Cognitive Writing Model

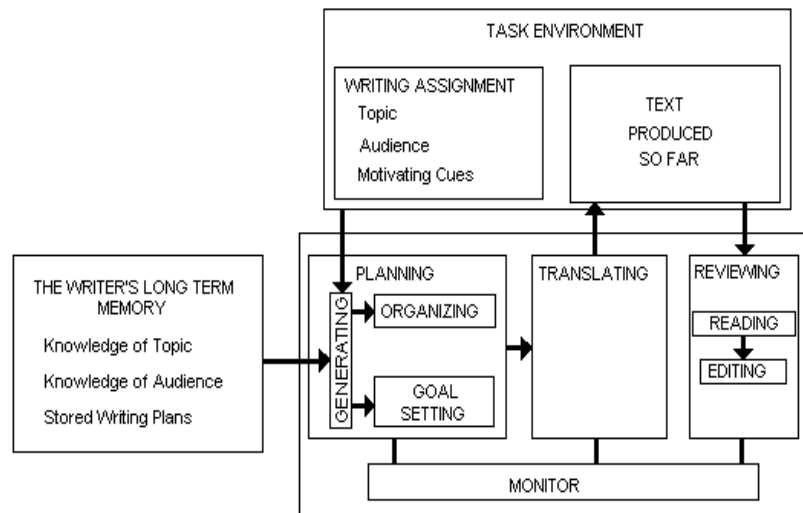


Figure 4.3. From Hayes, J. R., & Flower, L. S. (1980). Identifying the organization of writing processes. In L. Gregg & E. Steinberg (Eds.), *Cognitive processes in writing* (pp. 3-30). Hillsdale, NJ. Erlbaum.

Unfortunately, this model was still criticised for its vague classification and no reference to individual differences and social contexts (Alamargot & Chanquoy, 2001). Hayes (1996) further refined the original model by including the physical environment, the writer's motivation and affects to elaborate the writing process. This individual-environmental model entails two major components: the task environment (social and physical environments) and the individual (working memory, long-term memory, motivation/affect, cognitive processes). According to Hayes (1996), the inclusion of environments in the writing model contributes to a complete understanding of composing. Figure 4.4 shows the individual-environmental model.

Figure 4.4: Individual-Environmental Writing Model

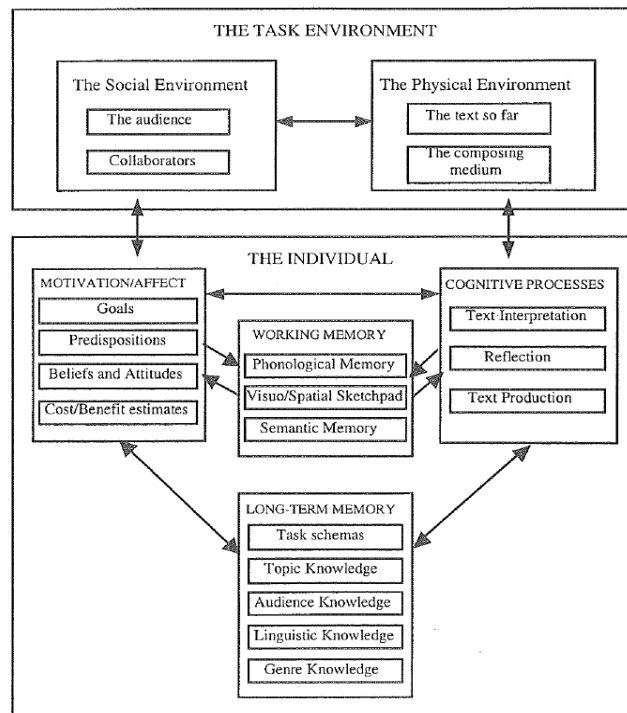


Figure 4.4. Hayes, J. R. (1996). A new framework for understanding cognition and affect in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 1–27). Mahwah, NJ: Erlbaum.

The revised model incorporates cognition, motivation, affect and social environments into the writing process. Compared with the original model (Hayes & Flower, 1980), this new model emphasises working memory in text production, visual-spatial and linguistic representations for text comprehension, the role of motivation and affect and the reorganisation of cognitive processes such as text interpretation, reflection and text production. This model reveals that writing “is a communicative act that requires a social context and a medium...a generative activity requiring motivation, and it is an intellectual activity requiring cognitive processes and memory” (Hayes, 1996, p. 5).

Considerable research in the past three decades has sought to investigate the social cognitive model of composing in both L1 and L2 settings with fruitful achievement (see Hayes, 2012 for more information). This study is framed within the individual-environmental model because it recognises the interaction of cognitive, affective, behavioural, environmental and psychological factors in the composing process. This

model helps reveal multidimensional characteristics of writing processes, which contributes to providing a better understanding of how to promote self-regulated competence in writing contexts.

4.4 A Multi-Dimensional Model of SRL Strategies in L2 Writing

This study proposes that the two theoretical disciplines of sociocognition and socioculture work together in depicting a more complete picture of literacy development from mental and social interactive views. Such a view plays an essential role in the intricate and complex pedagogical process for more effective instruction. Kucer (2014) proposed to include multiple dimensions to exploring literacy from cognitive, linguistic and sociocultural and developmental perspectives. In a similar vein, the research on writing strategies should embrace a multi-dimensional lens, which is expected to more vividly depict the development of language learners.

Harris et al. (2011), among other scholars, have regarded writing as the most complex task in developing language proficiency due to its “recursive, strategic, and multi-dimensional” characteristics (p. 188). This view is echoed by scholars in L2/EFL writing (Manchón, 2009; Silva & Matsuda, 2010). They have acknowledged that the composing process not only requires writing knowledge and the regulation of behaviours but also the deployment of strategies under the influence of multiple factors. Therefore, examining writing strategies conceptualised in SRL from a multi-dimensional perspectives would be a more viable approach to developing proactive and efficient learning in EFL writing. I argue that writing instruction, theoretically grounded in a multi-dimensional framework, may offer better potential for teaching writing in the classroom effectively as this framework looks at the writer in a comprehensive manner.

Grounded in SRL theory from sociocognitive and sociocultural perspective, this study proposes a four-dimensional model of SRL writing strategies embracing cognition, meta-cognition, social behaviour and motivational regulation. SRL writing strategies in this study follow Oxford’s (2011) definition that they are “deliberate, goal-directed attempts to manage and control efforts” (p. 12). This definition emphasises writers’ proactive engagement in the writing process under the multi-dimensional influence of

cognition, metacognition, behaviours and motivational regulation (see Teng & Zhang, 2016b, for more information).

4.4.1 Cognitive strategies and metacognitive strategies

Cognitive strategies refer to skills students use to process the information or knowledge in completing a task (Pintrich et al., 1991). They help learners construct, transform, and apply L2 knowledge (Oxford, 2013). A plethora of research has confirmed the essential role of text processing, organisation and rehearsal in fostering active engagement in learning and high levels of academic achievement (e.g., Pintrich & De Groot, 1990; Zhang et al., 2008; Winne, 2011).

In turn, metacognitive strategies refer to the skills used to control and regulate learners' own cognition and the cognitive resources they can apply to meet the demands of particular tasks (Winne, 2011). Many studies have confirmed the significant role of metacognitive strategies such as goal setting, planning, monitoring, and evaluating in cultivating L2 proficiency (e.g., Zhang, 2010). According to Oxford (2013), "the cognitive and metacognitive strategies facilitate understanding, increase meaningful mental associations, and are the most useful strategies for long-term retention of information" (p. 30); all contribute to deep processing. By including cognitive and metacognitive strategies it should be possible to ascertain students' active role in learning to write; in turn, having this kind of evaluative instrument might raise students' awareness of what cognitive/metacognitive strategies can facilitate their learning, thus contributing to better academic performance.

4.4.2 Social behavioural strategies

As a key aspect of self-regulation, social behavioural strategies involve individuals' attempts to control their learning behaviour under the influence of contextual and environmental aspects (Zimmerman, 1989, 2011). Although there is a wide range of strategies subsumed by such a construct, we only focus on two sub-categories involved in feedback-handling and peer learning. SRL models emphasise the importance of feedback loops in which learners monitor, evaluate and adjust strategies, goals and motivational factors in a given task (Zimmerman, 2013). Therefore, how learners

handle others' feedback mediates the use and adjustment of other strategies, and, in turn, affects learning outcomes. Also, the development of SRL relies on the social mediation and interactive support from teachers and peers, which is beneficial to learners' active learning and enhancement of motivation (Schunk & Rice, 1986). Self-regulated learners do not work in isolation. When faced with a complex task, they either seek help from others who are knowledgeable such as their peers, family members and teachers, or consult written resources (Zimmerman & Risemberg, 1997).

Although previous studies have confirmed the essential role of social behaviour strategies (e.g., Zimmerman & Martinez-Pons, 1986), little attention has been paid to the evaluation of the construct in EFL writing through empirical research. This study proposes that social behaviour strategies, as a distinct construct of the SRL mechanism, interact with cognition, metacognition and motivational regulation, which, taken together, contribute to EFL writing performance. Ferris and Robert's (2001) study has shown how important teachers' feedback on earlier drafts of work can be in influencing learners' writing processes. Peer response is also valuable in providing feedback and extending the writer's audience beyond just the teacher. Indeed, it has been argued that developing self-regulated learners in classroom activities requires peer interaction; an additional benefit is that it also contributes to constructing a cooperative learning environment (Zimmerman, 2013).

4.4.3 Motivational regulation strategies

Motivational regulation strategies are defined as the procedure or thoughts that students apply purposefully to sustain or increase their willingness to engage in a task (Wolters, 1999). According to Zimmerman & Risemberg (1997), writing "is a social cognitive process wherein writers must be aware of readers' expectations and must be willing to devote the personal time and effort necessary to revise text drafts until they communicate effectively" (p. 76). In other words, writing achievement is contingent on the degree of individuals' motivational control to use the strategies to regulate their writing performance. Previous studies, albeit limited, have found that motivational regulation strategies interact with cognitive, behavioural and contextual variables in SRL models (Pintrich, 2004). For that reason motivational regulation strategies play a mediating role in influencing students' choice, effort, cognitive engagement and

academic performance in educational contexts, such as psychology, math, science, and L1 English (e.g., Wolters & Mueller, 2010). However, whether motivational regulation strategies also constitute a key component of SRL strategies in EFL writing as yet awaits empirical exploration. Based on the tenets of SRL and existing research, for this study I propose that motivational regulation strategies be included in the spectrum of SRL strategies so as to better characterise the writing process.

4.5 Summary

This chapter opened with a brief introduction to SRL from sociocognitive theory and provided a detailed explanation of four essential components in SRL models. The second part presented how sociocultural theory informed the understanding of the writing process and research on LLSs. This study argued for a synergy of sociocognitive theory and sociocultural theory to develop a better understanding of SRL in EFL writing contexts. The third part introduced different writing models conceptualised in cognitive theory and pointed out that this study was framed within the individual-environmental model (Hayes, 1996), which recognises the interplay of individuals and environments in the composing process. This chapter ended by proposing a multi-dimensional model of SRL strategies in L2 writing, which was composed of cognition, metacognition, social behaviour and motivational regulation.

CHAPTER FIVE

RESEARCH DESIGN AND METHODOLOGY

This chapter first presents an overview of the research design, participants involved in different stages and the rationale for the research methods, followed by a brief introduction to ethical considerations. The ensuing sections provide a detailed explanation of the research design that includes instrument development and validation, observational design and self-regulated strategies-based writing intervention.

5.1 Overview of the Research Design

This is an observational and quasi-experimental research design with an aim to foster self-regulated EFL writers from the perspectives of SRL strategies, motivational beliefs, self-efficacy and writing performance. This study drew on a mixed-methods approach that included self-report questionnaires, writing tests, classroom observations, interviews and writing journals. Mixed-methods research is useful to “clarify and explain relationships found to exist between variables [in depth and] confirm or cross-validate relationships [among them]” (Fraenkel, Wallen, & Hyun, 2012, p. 558).

In the preliminary stage, an initial attempt was made to conceptualise, develop and validate two self-developed questionnaires to measure the multi-dimensional structure of SRL strategies and the underlying factors of self-efficacy in EFL settings. In addition, the measurement for investigating motivational beliefs was modified from the well-established instrument, Motivated Strategies for Learning Questionnaire (MSLQ, Printrich et al., 1991) and validated for the Chinese EFL writing context, in which this study was conducted.

The main study is composed of two phases. Phase One aimed to map out the situation of Chinese university students’ SRL strategies, motivational beliefs, self-efficacy and writing performance. Data were collected from three self-reported questionnaires and a writing test.

Phase Two implemented and evaluated a self-regulated strategies-based writing intervention. This was a quasi-experimental research design with an experimental group

and a control group. Data were collected via a range of measures that included self-reported questionnaires, pre-, post- and delayed post-writing tests, student interviews and daily journals. Table 5.1 presents an overview of the whole research design.

5.1.1 Participants

This study recruited a total of 781 English-major students on a voluntary basis from six universities in Northeast China in three rounds. Convenience sampling was used because it is a quick way to collect quantitative data, although it has been criticised for the risk of not representing the population (Dörnyei, 2010). However, this problem might have been alleviated in this study because Chinese university students from the same major were usually analogous in terms of their education background and age. For English-major students in China, English writing is a compulsory course administered consecutively during the first two years of their four-year undergraduate programme, required by the *National English Syllabus for English Majors* (MoE, 2004) (see Chapter 2 for more information). Their data were expected to provide first-hand information about the current writing courses and how to integrate self-regulated strategies-based instructional model into regular writing classrooms.

All the participants are of Chinese nationality and they all speak Chinese as their mother tongue. At the time of the study, these respondents had received the writing course for at least one term at the tertiary level. On the average, these participants had 9.45 ($SD = 1.95$) years of formal English learning by the time of this study. Table 5.2 shows detailed information of the participants in each stage.

Table 5.1 An Overview of the Research Design

Phase	Research Objectives	Instruments	Participants
Preparatory Stage	Develop and validate instruments	<ul style="list-style-type: none"> • Writing Strategies for Self-regulated Learning Questionnaire (WSSRLQ) 	English majors (n = 312) Year 1–Year 4
		<ul style="list-style-type: none"> • Second-Language Writing Self-efficacy Scale (L2WSS) 	
		<ul style="list-style-type: none"> • Writing Motivational Belief Questionnaire (WMBQ) 	
Main Study – Phase One	Investigate current situation of SRL strategies, motivational beliefs and self-efficacy in EFL writing contexts	<ul style="list-style-type: none"> • Questionnaires (WSSRLQ; L2WSS; WMBQ) 	English majors (n = 389) Year 1– Year 4
		<ul style="list-style-type: none"> • Writing test 	
Main Study – Phase Two	Implement self-regulated strategies-based writing intervention	<ul style="list-style-type: none"> • Pre- and post-questionnaires (WSSRLQ; L2WSS; WMBQ) 	English majors (Year 2) Experimental group (n = 39) Control group (n = 41)
		<ul style="list-style-type: none"> • Writing tests (pre-, post- and delayed post-tests) 	
		<ul style="list-style-type: none"> • Self-regulated strategies-based writing intervention (four months) for the experimental group 	
	Case study	<ul style="list-style-type: none"> • Classroom observations 	Two students (Experimental group)
<ul style="list-style-type: none"> • Semi-structured interviews (pre-and post) 			
		<ul style="list-style-type: none"> • Writing Journals 	

In the preliminary stage, a total number of 312 English-major students were recruited from two medium-ranking universities in Northeast China. This was a convenience sample, with participants selected from the first year to the fourth year (28% freshmen, 29.5% sophomores, 28.2% juniors and 14.2% seniors). Of these, fifty-nine percent ($n = 243$) were females and forty-one percent ($n = 169$) were males between the ages of 18 and 24 ($M = 20.051$, $SD = 1.382$).

In Phase One of the main study, another group of English-major students ($n = 389$) were recruited from another three universities in the same regional area. All respondents were students across the universities, ranging from the first year to the fourth year (30% freshmen, 28% sophomores, 27.5% juniors and 14.5% seniors). There were more females ($n = 237$, 61%) than males ($n = 152$, 39%) between the ages of 18 to 24 ($M = 20.453$, $SD = 1.391$). Based on students' writing test scores, the sample was further divided into two groups: high writing-achievers ($n = 101$), students with writing test scores of 85 or higher; and low writing-achievers ($n = 98$), students with writing test scores of 65 or below.

In Phase Two, a new group of participants ($n = 80$) were voluntarily recruited from four intact classes in another medium-ranking university. They were second-year English majors who have developed a certain degree of writing and linguistic knowledge (e.g., rhetorical knowledge). All the participants were comparable with regard to years of English learning, age and educational background. At the time of the study, all these respondents were enrolled in a required English writing course, which focused on instruction in linguistic knowledge and paragraph writing. They reported that they had never received any process writing or strategies-based writing instruction. Prior to the intervention, all the participants were invited to complete a Developing Self-regulated Writer Survey along with a timed-writing test to examine their reported use of SRL writing strategies, perceived motivational beliefs and self-efficacy as well as writing performance. Based on these data, the four intact classes were randomly assigned into two conditions (experiment and control). Among these students, there were 30 female students (77%) in the experimental group and 29 female students (71%) in the control group. The average age of these students was 18.808 ($SD = 1.253$), with, on average,

nine years of English learning experience ($M = 9.082$, $SD = 1.145$). None of them had experience in studying abroad (see Table 5.2 for participant information).

During Phase Two, two students from the experimental group were invited to attend a case study with an aim to solicit in-depth information about the effect of strategies-based writing instruction. Purposive sampling (Creswell, 2014) was conducted in the recruiting process. The two students were voluntarily recruited from the high writing-proficiency group and the low writing-proficiency group. This aimed to investigate how students with different linguistic proficiencies responded to the self-regulated strategies-based writing intervention.

Table 5.2 An Overview of Participant Information

Phases	Objectives	Total <i>N</i>	Major	Grade (%)	Gender	<i>M</i> _{age} (<i>SD</i>)
					<i>N</i> _{female} (%)	
Preliminary Study	Instrument development and validation	312	English	Year 1 (30%)	243 (59%)	20.051 (1.381)
				Year 2 (28%)		
				Year 3 (27.5%)		
				Year 4 (14.5%)		
Phase One	Observational investigation of SRL strategies, motivational beliefs, self-efficacy and writing performance	389	English	Year 1 (28%)	237 (61%)	20.453 (1.291)
				Year 2 (29.5%)		
				Year 3 (28.2%)		
				Year 4 (14.3%)		
Main Study	Strategies-based writing intervention	Experimental group (<i>N</i> = 39)	English	Year 2	59 (74%)	18.808 (1.253)
	Phase Two	Control group (<i>N</i> = 41)				
	Case study	One high writing-proficiency & One low writing-proficiency from the experimental group				

5.1.2 Instruments

This section provides an overview of the instruments used to evaluate students' writing performance, their reported use of SRL strategies and perceived motivational beliefs and self-efficacy. It also presents a justification of the underlying rationales for the selection of these measures.

5.1.2.1 Self-report questionnaires

Self-report questionnaires were used to evaluate three variables embracing SRL strategies, motivational beliefs and self-efficacy. As Oxford (2011) advocates, “self-report is one of the very few ways that we can gain access to the learners' thoughts, feelings, attitudes, and strategies” (p. 142). In addition, the self-report questionnaire is an effective and versatile instrument to gather factual, behavioural and attitudinal data (Dörnyei, 2010). There are some limitations in using self-report questionnaires, such as inappropriate comments from participants or careless responses, but this type of measurement is useful for collecting data in large-scale research (Dörnyei, 2007). Additionally, data collected from questionnaires can “provide important insight into general tendencies in a particular population” (Petrić & Czár, 2003, p. 209). Self-report questionnaires were, therefore, the most appropriate way to investigate the current situation of students' SRL strategies, motivational beliefs and self-efficacy from a large scale and explore possible relationships among these variables.

5.1.2.2 Semi-structured interviews

A semi-structured interview, as a form of formal verbal reports, is composed of “a series of questions designed to elicit specific answers from respondents” and gain more insight into people's ideas, opinion, and their experience” (Fraenke et al., 2012, p. 451). It is a useful way for researchers to check the accuracy of, and verify or refute, information obtained through other forms of research methods, such as close-ended questionnaires (Dörnyei, 2007). In this study, interviews were administered to two students from the experimental group in terms of their perceptions of writing courses, their use of SRL strategies, their motivation beliefs and their self-efficacy. Data

obtained were used to triangulate the quantitative data and to explore how strategies-based writing instruction impacted EFL students.

5.1.2.3 Writing tests

An argumentative essay with a given topic was used to investigate students' writing performance because it is a popular assessment method widely adopted in EFL classrooms in China and around the world. This form of test is regarded as an effective way to evaluate students' writing achievements in light of their linguistic competence, critical thinking and articulation of ideas (Hirose, 2003). Essay writing is an important component of many national English assessments such as the Test for English Majors (TEM) and the College English Test (CET) (Zheng & Cheng, 2008, see also Chapter One for more information), designed to assess students' ability to communicate ideas using written English.

In this study, students were required to complete a given-topic essay of at least 200 words based on the prompt (e.g., title of the topic and information outline) within 60 minutes. Writing topics were chosen from the Test for English Majors, Band 4 (TEM 4) past papers designed as general, culturally inoffensive and familiar to participants' daily life with the same difficulty to guarantee the fairness to every student.

5.1.2.4 Classroom observations

Classroom observation is one of the main techniques used in qualitative research to collect and analyse the actual data observed from the targeted population (Dörnyei, 2007). It is a useful instrument to collect first-hand information about the actual learning environment and teaching practices. Many researchers have argued that findings of classroom observations are helpful to verify self-report data garnered from interviews and questionnaires and supplement these retrospective measures which have some inherent problems (e.g., inaccurate expression, memory breakdown and irrelevant information) (Hashemi, 2012). At this stage, classroom observations were conducted with both the experimental group and the control group for eliciting information about self-regulated strategies-based writing instruction and regular classroom teaching. During the classroom observations, the researcher kept note of the teaching practices

with a focus on the SRL strategies, teaching activities and students' involvement based on the classroom observation checklist.

5.1.2.5 Writing Journals

Two case study students were required to keep learning journals during the intervention to record changes in terms of their attitude towards the SRL writing course, their understanding and use of SRL strategies and psychological development (e.g., motivation, interest and self-efficacy). They were required to keep journals monthly from the start to the end of the intervention. By the end of the experimental study, the researcher collected copies of these journals and returned the original ones to participants. In total, the high writing-proficiency student completed three writing journals and the low writing-proficiency student completed two writing journals.

5.2 Ethical Considerations

5.2.1 Consent form

Prior to the field work, a signed consent form was sought from the Dean of each university, EFL teachers and students when they fully comprehended the purpose and procedure of the research as stated in the Participant Information Sheet (PIS), which had been sent to them earlier. In order to avoid coercion in recruitment, this project took an indirect approach to recruiting potential participants. The researcher initially contacted the Dean of each faculty by a Chinese email with a Chinese version of PIS/CF. An English version of email, PIS and CF was attached and a Chinese version were submitted to the ethic committee before using. The aims of the study, the time commitment, participating requirement and any necessary information were fully described in PISs and CFs. All participants were informed that the research project was a part of the researcher's PhD study and participants had the right to join or withdraw themselves or their data at any time without giving a reason. They were informed of the purpose of this study and that the returning of their questionnaire is on a voluntary and anonymous basis.

Having obtained the permission to contact EFL teachers and students, attend the meeting and conduct the research at the university, the researcher initially met staff at a

faculty meeting to explain the research, deliver PISs/CFs, and invite participation. For recruiting students, detailed information about the research was circulated by teachers on behalf of the researcher. Students who were interested obtained the PISs and CFs from their teachers and returned the CFs to a box in the faculty. Then the researcher collected the CF and distributed the questionnaire to them. CFs were required to be returned to a box in the College of Foreign Languages in each university. See Appendices A-D for PISs and CFs.

5.2.2 Right to withdraw from participation

Participants were informed that: a) they were entitled to withdraw themselves, or any data provided by them, at any time before 1st January, 2014 without explanation; b) they had the right not to answer any specific question; and 3) they had the recorder turned off at any stage when being interviewed and that participation or non-participation would not affect their normal courses, grades, or relationships with their college. They were also assured that they would not be disadvantaged if they missed the intervention courses or regular courses.

5.2.3 Anonymity/confidentiality/privacy

As the questionnaire was anonymous and participants were asked to write a unique identification name, which could only be recognised by them. During data analysis, each participant was given a code with numbers and a list was maintained to link participants, via the unique name with the questionnaires and writing samples. This information was kept separately from the data and was known to the researcher only. The anonymity of non-participants in group situations was preserved and students who declined to participate could choose to return a blank questionnaire. Participants were assured of anonymity in reporting. If any information provided by participants is reported or published, pseudonyms will be used to protect their identity and no identifying information or data collected in the research will be disclosed to a third party.

5.2.4 Data storage/retention/destruction/future use

Hard copy data are securely stored in a locked cabinet at the University of Auckland and electronic data are stored in files on the researcher's computer, which is password-

protected. After six years, all hard copy data will be shredded and the digital information will be deleted permanently. The data collected from the research were used for the researcher's PhD thesis in the University of Auckland, academic publications, and conference presentations. All this was communicated in the PISs and the CFs. Participants were informed that they could indicate on the CF if they wished to have a copy of the research findings sent to them by the research when the project was complete.

5.3 Preparatory Stage – Instrument Development and Validation

Previous literature has indicated that there are some established instruments to investigate SRL strategies in L1 contexts with empirical validation (Pintrich et al., 1991; Weinstein et al., 2011; Zimmerman & Martinez-Pons, 1986). However, the validity and reliability of these instruments cannot be guaranteed in L2 settings. Nor were they designed for the specific Chinese EFL writing context. According to Muijs (2011), a prerequisite for successful research is the use of reliable and valid instruments. Therefore, it was essential to modify an existing instrument or devise, if necessary, a new instrument to evaluate the targeted factors.

Two self-report questionnaires were developed: the Writing Strategies for Self-regulated Learning Questionnaire (WSSRLQ) and the Second-Language Writer Self-efficacy Scale (L2WSS) to investigate SRL strategies and self-efficacy in EFL writing contexts. Given that writing is a complex, situated and multi-dimensional process (Roca de Larios et al., 2008), the two instruments were designed to evaluate the multi-faceted feature of SRL strategies and the underlying factors of self-efficacy for better understanding the nature of writing and characteristics of writers (Bruning et al., 2013). Then the two newly-developed questionnaires were piloted quantitatively to check their reliability and validity through exploratory and confirmatory factor analyses (EFA and CFA).

The Writing Motivational Belief Questionnaire (WMBQ) was directly modified from the well-established instrument –The Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al., 1993). The WMBQ was used to investigate students' perceived motivational beliefs in EFL writing settings. The measurement was evaluated through

CFA for examining the psychometric properties of the instrument in EFL writing contexts. This section presents a description of the instrument developing process and the rationales underlying the design of these measures.

5.3.1 Writing Strategies for Self-regulated Learning Questionnaire

This study made an initial effort to develop and validate the WSSRLQ within SRL theory. As part of the larger field of LLS research, writing strategies have been given sufficient attention by L2 researchers right from the outset. However, extensive investigation into the psychometric properties of the instrument from an SRL perspective is still rare. Reporting the reliability and validity of the instruments for data collection is an important step in the research, which unfortunately is, often either too brief or ignored in many studies on LLSs (Rose, 2012). This negligence spurred my investigation into the psychometric characteristics of the instrument devised to examine the repertoire of SRL strategies in L2 writing contexts.

In this study SRL strategies are defined as proactive engagement in the writing process under the influence of cognition, metacognition, behaviours and motivational regulation. The choice of the four dimensional strategies, on the one hand, corresponded to the features of SRL (Zimmerman, 2011), as noted earlier in the theoretical discussion. On the other hand, it was in line with the interpretation of writing from cognitive theory, which postulates that writing behaviour is under the influence of “cognitive, affective, social, and physical conditions” (Hayes, 1996, p. 5). Given the diverse categories of strategies in the four dimensions, the choice of SRL strategies in this questionnaire was necessarily selective and synthetic, rather than fully inclusive. The instrument only elicited some strategies which have been shown to be essential to writing achievement or under-explored in empirical research in EFL writing contexts. The items of the WSSRLQ were developed targeting the learning behaviours of students in writing courses, such as their use of course material and in-class peer discussion in the form of declaration of specific strategies used during learning to write and composing processes. This newly-developed questionnaire aims to: (a) elicit students’ reported SRL strategies to guide curriculum design and teachers’ practice in writing courses; (b) provide theoretical analysis of SRL strategies from social, cognitive, motivational and contextual perspectives; (c) be used as a tool to evaluate the effectiveness of

instructional interventions or writing courses; and (d) assess learners' level of using SRL strategies for the self-evaluation or awareness-raising purpose.

5.3.1.1 Item generation

Following the standard criteria for developing a reliable and valid questionnaire to evaluate writing strategies (Dörnyei, 2010; Petrić & Czár, 2003), the process of item generation of the WSSRLQ began with consulting the related literature and a nuanced examination of established instruments devised to evaluate SRL strategies. To establish the construct validity of this questionnaire for use with adult L2 writers, I consulted some established instruments such as the Self-Regulated Learning Interview Scale (SRLIS, Zimmerman & Martinez-Pons, 1986), the Motivated Strategies for Learning Questionnaire (MSLQ, Pintrich et al., 1991) and the Motivational Regulation Strategies Questionnaire (MRSQ, Wolters, 1999).

A list of 48 items pertaining to EFL writing strategies was generated. Three local experts in the field of LLSs and SRL were invited to examine the initial list of items. Then they scrutinised the theoretical rationale, checked the questions for the constructs being measured and rated the degree to which the survey questions matched the constructs as defined in this study. In the end, this procedure resulted in the elimination of 3 items with the lowest rating. The revised list was then given to five EFL students who were asked to check the items for clarity and readability. These evaluations of the instrument resulted in eliminating irrelevant and double-barrelled items, adding some items to cover conspicuous omissions, and collapsing related statements. The finalised instrument containing 45 items was sequenced logically and organised according to the clusters of subcategories. A 7-point Likert scale with gradation rating from 1 (not at all true of me) to 7 (very true of me) was adopted to explore the trait features of SRL strategies. As Dörnyei (2010) argued, the multi-item rating scales are scientific measurements utilising sequential response categories and they are used to obtain scientific and reliable data. The WSSRLQ was then subjected to more statistical scrutiny to determine construct validity through factor analysis.

5.3.2 Second-Language Writer Self-efficacy Scale

5.3.2.1 Rationales for instrument development

Informed by Bruning et al. (2013), this study proposed a multi-dimension model of L2 writing self-efficacy grounded in a social cognitive view of writing and SRL theory. From a social cognitive framework (Hayes, 1996), writing is regarded as “a communicative act that requires a social context and a medium...a generative activity requiring motivation, and it is an intellectual activity requiring cognitive processes and memory” (p. 5). It is best characterised as an individual-centred, process-oriented and goal-directed process with recursive and multi-dimensional demonstration of the complexity of cognitive processes involved in composing (Hayes, 1996). This view is also echoed by many scholars in L2 writing (e.g., Manchón, 2012; Silva & Matsuda, 2010).

Pajares and Valiante (2006) argued that measures of self-efficacy must “reflect an understanding of both the domain under investigation and its different features, as well as the types of capabilities the domain requires and the range of situations in which these capabilities might be applied” (p. 162). Guided by Hayes’ (1996) social cognitive model of writing and Zimmerman and Bandura’s (1994) SRL theory, this study proposed a three-factor model of writing self-efficacy that reflects learners’ linguistic, behavioural and self-regulative demands in L2 writing processes.

With regard to the intrinsic nature of writing itself, self-efficacy works throughout the whole composing process, from idea generation (e.g., I can think about some ideas to write), the utility of linguistic and rhetorical knowledge (e.g., I can write compound and complex sentences with grammatical structure; I can revise my composition to make it better organised), to the monitoring of writing and learning activities (e.g., I can evaluate whether I achieve my goal in learning to write).

In the learning process, students’ confidence in their behaviour affects their mastery of knowledge, their motivation, effort expending and persistence (e.g., I can do well in writing courses; I am confident I can do an excellent job on the assignment and tests in writing courses). Previous research has found that learners’ confidence in their course

performance is closely related to their perceived value of tasks, extrinsic motivation and use of learning strategies, which in turn impacts their academic outcomes (Pajares, 2008; Pintrich, 2004). Therefore, the exploration of learners' confidence in their task-related performance would provide useful information that can be used by teachers and students for fostering independent and proactive writers (Schunk & Ertmer, 2000).

From an SRL perspective, writing activities are perceived as “self-planned, self-initiated, and self-sustained processes” (Zimmerman & Risemberg, 1997, pp. 73–74). This indicates that learners' performance and achievement in writing contexts are under the influence of the self-evaluation of their capability. According to Bandura (1991), people's beliefs in their writing competence function as an important “set of proximal determinants of human self-regulation” (p. 257). As an essential component of self-regulation theory, self-efficacy beliefs affect the self-monitoring and cognitive processing of different aspects of learners' performances and their academic outcomes (Bandura, 2006). In order to make the construct of self-efficacy more operational from an SRL perspective, this study includes self-regulatory efficacy as a dimension of self-efficacy beliefs and defines it as learners' capability to use metacognitive control in the learning-to-write process (e.g., I can think of my goals before writing; I can evaluate whether I achieve my goal in writing).

I believe that exploring writing self-efficacy from a multi-dimensional perspective would provide a better understanding of the intrinsic features of writing itself and the characteristics of learners for developing active and independent L2 writers.

5.3.2.2 Item generation

On the basis of the previous literature and established instruments used in L1 writing settings (Bruning et al., 2013; Pajares & Valiante, 1999; Shell et al., 1989; Zimmerman & Bandura, 1994), the development of the L2WSS followed the standard criteria recommended for use in developing a reliable and valid questionnaire (Bandura, 2006; Dörnyei, 2010). The selection of questions emphasised the three dimensions in relation to the centrality of knowledge, behaviour, and regulation with the adaptation to classroom environments in L2 writing. Each question was worded as a “can do” statement to reflect the judgment of capability with a behaviour situation (Bandura,

2006). The instrument was designed with a 7-point Likert scale ranging from 1 (not at all true of me) to 7 (very true of me). Respondents were required to rate their confidence level when completing specific writing activities, probing their confidence in using linguistic knowledge (e.g., After writing, I can revise my wordy or confusing sentences in my English composition), performance (e.g., I can understand the most difficult material presented in the writing course.) and self-regulation (e.g., I can evaluate whether I achieve my goal in writing.). The instrument was designed as a specific context-based and course-targeted questionnaire. The initial pool was generated with 25 items. Then two experts, whose research expertise was related to L2 writing or educational psychology, were invited to evaluate the initial item list. They were invited to evaluate the theoretical rationale, the consistency of construct and item relevance, and wordings. For face validity, focus group interviews with students and teachers (eight for each group) were conducted to evaluate the clarity, readability, and parsimony in scale length. Then the modified version of the questionnaire with 20 items was subjected to a more statistically rigorous scrutiny through EFA and CFA respectively.

5.3.3 Writing Motivational Belief Questionnaire

Writing Motivational Belief Questionnaire (WMBQ) was directly modified from Pintrich et al.'s (1991) Motivated Strategies for Learning Questionnaire (MSLQ) to elicit participants' motivational beliefs in EFL writing. This was a self-report instrument, with a 7-point Likert scale ranging from 1 (not at all true of me) to 7 (very true of me). As mentioned in Chapter Two, the MSLQ was designed to assess two distinct constructs: motivation (31 items) and use of learning strategies (50 items) in university classroom environments. The instrument has been validated by many studies in different contexts including China (e.g., Rao, Moely, & Sachs, 2000) demonstrating validity and reliability. This PhD study focused on five motivational factors that included extrinsic goal orientation (e.g., motivations focus on grades, rewards and approval from others), intrinsic goal orientation (motivations focus on learning and mastery of knowledge and curiosity), task value (judgments of how interesting, useful and important the course content is), control of learning beliefs (people's beliefs that their efforts to learn will result in positive outcomes) and test anxiety (worries and

concerns before or during a test). Given that the MSLQ was developed in general learning contexts, the wording of the selected items was checked and changed to be suitable for EFL contexts in China.

5.3.4 Procedures

In this preparatory stage, 312 English-major students from two universities in Northeast China participated voluntarily. They were invited to complete three questionnaires: the Writing Strategies for Self-regulated Learning Questionnaire (WSSRLQ), the Second-Language Writer Self-efficacy Scale (L2WSS) and the Writing Motivational Belief Questionnaire (WMBQ). All the questions in these questionnaires were written in simple English without translation because the readability and comprehension of these items had been verified in the pilot stage. In addition, the participants were English majors who, having received more than nine years of English education, were assumed to comprehend these questions without any difficulties, whereas, translation, may have changed the meaning of the original questions and compromised the reliability and validity of the questionnaires.

The three questionnaires were given to students after a writing course to elicit authentic context-based information. Instructions were reviewed and clarified first, and any doubts and comments were recorded and addressed. All the participants were informed that there were no right or wrong answers, and the researcher was only interested in an accurate appraisal of their reported use of SRL strategies and perceived motivational beliefs and self-efficacy. Any doubts and comments were recorded and addressed. On average, it took respondents approximately 20–25 minutes to complete the three questionnaires.

5.3.5 Data analysis

5.3.5.1 Preparation

Data collected from the three questionnaires were screened and cleaned first. Three aspects were thoroughly examined in terms of missing responses, normality and homogeneity for multivariate analysis (EFA and CFA). Participants who provided responses indicative of a lack of effort, intentional mischief or obvious inaccurate

responses were removed from the database. Missing data were examined via manual inspection first. Given that there were less than 10% missing values in this stage (Field, 2009), a listwise measure was applied using Statistical Package for Social Sciences (SPSS) Version 22.0 to remove all cases completely from data analysis. This study took reference to skewness and kurtosis as measures of normality for multivariate analysis. Data are assumed to be normally distributed if the standardised skewness values are between 0 and ± 3.0 and standardised kurtosis values do not exceed ± 8.0 (Field, 2009). This study also examined homogeneity of variance by a Levene's test because multivariate statistical measures (e.g., multiple regression analyses, structural educational modelling, exploratory analysis, confirmatory factor analysis) require that the data meet the assumptions of homogeneous variances (Raykov & Marcoulides, 2008). Initial data imputation revealed that all quantitative data collected were normally distributed and demonstrated homogeneity of variance.

5.3.5.2 Factor analysis

In the instrument validation stage, data collected from the three questionnaires were subjected to a more statistically rigorous scrutiny for checking their construct validity by using a factor analysis. According to Coakes, Steed and Price (2008), factor analysis is a useful technique for reducing “a large number of variables to a smaller set of underlying factors that summarize the essential information contained in the variables” (p. 128). In the preliminary stage, I used exploratory factor analyses (EFA) to examine underlying factors of the newly developed questionnaires, the Writing Strategies for Self-regulated Learning (WSSRL) and the L2 Writing Self-efficacy Scale (L2WSS).

After modification, confirmatory factor analysis (CFA) was applied to appraise the plausibility of the factors garnered by EFA in the WSSRL and the L2WSS. It has been acknowledged that CFA conducted using structural equation modelling (SEM), allows for a quantitative test of the theoretical model and a tighter specification of multiple hierarchies by utilising the factor patterns, correlation patterns, covariance patterns, and residual or error values within a data matrix (Kaplan, 2009). SEM is regarded as a more conservative and yet powerful approach that measures the degree and direction of correlations between factors by taking into account all correlations and covariances among all items in the data matrix simultaneously (Kline, 2011). In addition, the

Writing Motivational Belief Questionnaire (WMBQ) was also validated via CFA in this stage given that the instrument was modified to suit the Chinese EFL writing context. IBM SPSS AMOS computer program, Version 22 (Arbuckle, 2013), was employed to examine the factorial structure of the questionnaires.

The maximum likelihood (ML) estimation method was applied to evaluate the model fit. This study interpreted the CFA data based on the several omnibus fit statistics to evaluate goodness-of-fit of the proposed models. The chi-square statistic in CFA tests the null hypothesis and a significant value χ^2 would indicate an unacceptable fit of the model to the data (Bentler & Chou, 1987). Due to the sample-size dependency of the chi-square test statistic, this study used multiple fit indices that include absolute fit indices and incremental fit indices, supplementing the chi-square test statistics. Absolute fit indices determine how well the *a priori* model fits, or reproduces the data (L. Hu & Bentler, 1999). Three absolute fit indices: the ratio of chi-square divided by the degree of freedom (*df*), the Root Mean Square Error of Approximation (RMSEA) with its corresponding 90% confidence interval and the standardized root mean square residual (SRMR) were reported. Chi-square/*df* < 3 indicates the best fit with the non-significant *p* value to accept the null hypothesis that there is no significant difference between the model's implied variances and covariances and the observed variances and covariances (Marsh, Balla, & McDonald, 1988). RMSEA is often used as an indicator of model parsimony to assess the model fit while taking into the account a model's complexity (Steiger & Lind, 1980). The RMSEA values below .80 indicate an acceptable mode (Bentler, 1995). The SRMR is the square root of the discrepancy between the sample covariance matrix and the model covariance matrix. Values for the SRMR less than .08 are generally indicative of acceptable model fit (Bentler, 1995).

Incremental fit indices compare the chi-square for the hypothesised model to one from a baseline/null model, in which all of the variables are uncorrelated (L. Hu & Bentler, 1999). This study reported two incremental fit indices: the comparative fit index (CFI) and the Tucker-Lewis index (TLI) (Tucker & Lewis, 1973). The CFI analyses the model fit by examining the discrepancy between the data and the hypothesized model, while adjusting for the issues of sample size inherent in the chi-squared test of model fit and the normed fit index. A CFI value of .90 or larger is generally considered to

indicate acceptable model fit (Bentler, 1990). The TLI is also called the non-normed fit index or NNFI, which analyses the discrepancy between the chi-squared value of the hypothesised model and the chi-squared value of the null model. The recommend values of TLI are equal to or more than .90 indicating an acceptable level of model fit (L. Hu & Bentler, 1999).

This study also referred to the value of Gamma hat as one fit index due to its being resistant to sample size, model complexity, and model misspecification (Fan & Sivo, 2007). Gamma hat \geq .90 constitutes acceptable fit and values \geq .95 indicate good fit to the data (Fan & Sivo, 2007).

5.4 Phase One – Observational Study

Phase One of the main study has two aims: a) to document the current situation of SRL strategies, motivational beliefs and self-efficacy in EFL writing as reported by undergraduate students in China; and b) to model the predictive relationships of these factors on writing performance.

Research questions for Phase One are as follows:

Overarching research question:

What was the situation of SRL strategies, motivational beliefs and self-efficacy reported by university undergraduate students in EFL writing?

The specific research questions are as follows:

- 1) Did EFL students in China report any differences in using SRL strategies across year levels?
- 2) Were there any differences between high writing-proficiency students and low writing-proficiency students in terms of the self-reported SRL strategies and the perceived motivational beliefs and self-efficacy?
- 3) How did the self-reported SRL strategies correlate with the perceived motivational beliefs and self-efficacy in EFL writing?

- 4) What were the predictive relationships of the self-reported SRL strategies and the perceived motivational beliefs and self-efficacy with writing test scores?

5.4.1 Instruments

5.4.1.1 Developing Self-regulated Writer Survey

All the participants recruited in this stage were invited to complete a *Developing Self-regulated Writer Survey* in English. The survey was composed of demographic information and the three finalised questionnaires to investigate students' reported SRL strategies and their perceived motivational beliefs and self-efficacy in EFL writing settings.

The first part aimed to collect participants' demographic data in relation to their years of English learning, age, grade and overseas experience. The second part included the Writing Strategies for Self-regulated Learning Questionnaire (WSSRLQ) with 40 items investigating students' use of SRL strategies in relation to cognition, metacognition, social behaviour and motivational regulation. The third part was the L2 Writer Self-Efficacy Scale with 20 items probing into the three dimensions of performance, linguistics and self-regulation. The last part investigated motivational beliefs in EFL writing that included intrinsic goal-orientation, extrinsic goal-orientation, task value, control of learning beliefs and test anxiety. These self-development instruments were validated with satisfactory psychometric properties in the preliminary stage. Appendix E shows the content of the Developing Self-regulated Writer Survey.

5.4.1.2 Writing test

Students' writing performance was measured by an argumentative essay with a given topic used for the Test of English Majors-Level 4 (TEM 4). TEM 4 is a national test designed and validated for assessing all aspects of English achievement for English-major students in China (see Chapter One for more information). The TEM is composed of listening, reading and translation and a given-topic essay writing. The topic selected for this study was general, culturally inoffensive and familiar to participants' daily life to guarantee fairness to every participant. The argumentative essay test has been proven to be effective in evaluating students' academic

achievements in light of linguistic competence, critical thinking and articulation of ideas (Varghese & Abraham, 1998). At the tertiary level in China, university students are frequently asked to write arguments in linguistically complex, issue-driven tests in most academic disciplines. Thus, essay writing with a given topic related to students' learning or life was used with written prompts to investigate a relatively more comprehensive picture of writing proficiency.

Given that no significant difference was found in students' writing performance in a timed-environment (Kroll, 1990), all participants were required to write an argumentative essay with more than 200 words within 60 minutes during the writing class. The time limit of one hour and the minimum requirement of 200 words were designed to balance the demands on the participants' time with a reasonable level of task difficulty and complexity. The in-class test with the constraint time was designed to control many other variables influencing students' writing performance, for example seeking help from others or searching information from the internet or textbooks, which accordingly enhances the reliability and validity of the research. Appendix F presents the writing topic used in this stage.

In order to guarantee the reliability and validity of the writing assessment, I adopted an analytic scoring scheme because "the reliable scoring of performance assessments can be enhanced by the use of rubrics, especially if they are analytic, topic-specific, and complemented with exemplars and/or rater training" (Jonsson & Svingby, 2007, p.130). Many researchers have argued that the analytic scoring criteria help raters to approach the rating tasks in a more consistent way, which increases the reliability of scoring results (Cohen, 1994; East, 2009; Hamp-Lyons, 2002). Therefore, the overall quality of these essays was scored based on Jacobs, Zinkgraf, Wormuth, Hartfiel and Hughey's (1981) ESL Composition Profile. Jacobs et al.'s marking rubric has been successfully used in evaluating the writing proficiency levels of students in L2 programmes around the world, especially in the USA. The rubric uses a weighted scoring scheme on a percentile scale, measuring five aspects of writing performance: content (30%, 13–30), organisation (20%, 7–20), language (25%, 5–25), vocabulary (20%, 7–20) and mechanics (5%, 2–5). Each of the subcategories has four rating levels with clear

descriptors of the writing proficiency for that level and a corresponding numerical scale. See Appendix G for details of the writing scoring scheme.

A total of 312 essays were collected in this stage. Then all these papers were typed before scoring and participants' identifying information was removed. Previous research has shown that the appearance of text- or surface-level features (e.g., handwriting legibility or number of spelling mistakes) can influence judgments about writing quality (Graham, 1999). Before scoring, all data were coded blindly and all essays were transcribed as word-processor files to standardise the essay format and avoid handwriting bias by evaluators (Powers, Fowles, Farnum, & Ramsey, 1994).

Before the practical scoring was carried out, two independent raters, who are experienced EFL teachers each with a Masters Degree in Applied Linguistics, went through a standardisation procedure in a training session. Previous research has shown that rater training is contributable to increasing the reliability of scoring procedures (Hamp-Lyons, 1990). Neither of them was familiar with the research design to avoid bias when they evaluated these essays. A short rater training manual was issued, which contained the scoring rubric, instructions for how the rating process would be carried out, and 12 marked scripts representing different levels of performance. In the piloting stage, each rater was invited to assess sample scripts and then revealed their scores. Discrepant scores were discussed with reference to the scoring criteria. In the practical evaluating process, the two raters were first invited to independently re-score 60 randomly selected scripts (around 20% of the original samples) to determine the intra-rater reliability (agreement). The intra-rater coefficient for Rater One was $r = .90$, $p < .001$ and for Rater Two was $r = .92$, $p < .001$ and their inter-rater reliability between the raters was $r = .85$, $p < .001$, indicating satisfactory reliability. The high correlations over the threshold value of .80 indicated that both raters were measuring the writer's performance consistently (Hamp-Lyons, 1990). Then they were given the remaining writing samples to assess separately.

5.4.2 Procedures

At the beginning of the semester, all participants were invited to complete the *Developing Self-regulated Writer Survey* that was designed to collect participants'

demographic information and three questionnaires for eliciting information about their reported use of SRL strategies and perceived motivational beliefs and self-efficacy. They were asked to return the questionnaires within a week. This was an anonymous survey and instructions were reviewed and clarified first. On the following day, these students were invited to take an in-class writing test during one regularly scheduled class within 60 minutes. All participants were briefed on the purpose of the study and informed of their rights to withdraw from the research at any time during or after the data collection stage. They were clearly informed that there were no right or wrong answers and participation or non-participation would not affect their normal courses, grade, or relationship with their faculty and there was no evaluation on their performance and grade.

5.4.3 Data analysis

Data cleaning and imputation were conducted prior to them being subjected to inferential statistical analyses. For response validity, data collected from the three questionnaires and the writing tests were screened and cleaned first. Bivariate and multivariate assumptions were first examined. In this phase, descriptive analysis (e.g., normality, mean score, *SD*) were checked and reported.

5.4.3.1 Multivariate analysis of variance (MANOVA)

Data collected in Phase One of the main study were subsequently subjected to MANOVA to explore whether there was significant difference in the reported use of SRL strategies across four year levels. MANOVA is simply an ANOVA with several dependent variables. That is to say, ANOVA tests for the difference in means between two or more groups, while MANOVA tests for the difference in two or more vectors of means. MANOVA is robust to the violations of multivariate normality (Field, 2009).

In this stage, the independent variable (IV) was year levels and the dependent variables (DV) were the nine SRL strategies:

- Cognitive dimension: text processing and knowledge rehearsal;
- Metacognitive dimension: idea planning and goal-oriented monitoring;
- Social behaviour dimension: peer learning and feedback handling;

- Motivational regulation dimension: interest enhancement, motivational self-talk and emotional control.

Assumptions of the MANOVA were first examined, including relevant boxplots, scatterplot matrixes, the Shapiro-Wilk test for normality and Pearson's correlation coefficients, the output from the Mahalanobis distance test and Box's M test of equality of covariance, and if required, Levene's test of homogeneity of variance.

5.4.3.2 Independent-samples t-tests

The independent-samples *t*-test compares the means between two unrelated groups on the same continuous, dependent variable. A series of independent *t*-tests was used to investigate whether high writing-proficiency students distinguished from low writing proficiency-students in terms of the self-reported use of SRL strategies and the perceived motivational beliefs and self-efficacy. The IV was the writing proficiency level and DVs were:

- SRL strategies: text processing, knowledge rehearsal, idea planning, goal-oriented monitoring, peer learning, feedback handling, interest enhancement, motivational self-talk and emotional control;
- Motivational beliefs: task value, intrinsic goal orientation, extrinsic goal orientation, control of learning beliefs and test anxiety;
- Self-efficacy: linguistic self-efficacy, performance self-efficacy and self-regulatory efficacy.

5.4.3.3 Pearson product-moment correlations

The Pearson product-moment correlation is a measure of the strength of a linear association between two variables (Field, 2009). Pearson correlation coefficient (*r*) indicates the strength of the correlations between two variables in a linear model. In this stage, Pearson correlation was applied to investigate how the reported use of SRL strategies correlated with the perceived motivational beliefs and self-efficacy in EFL writing contexts.

5.4.3.4 Multiple regression analysis

Multiple regression analysis is a powerful technique used for predicting the unknown value of a variable from the known value of two or more variables (predictors) (Raykov & Marcoulides, 2008). A series of multiple regression analyses was applied to evaluate the predictive effect of the reported use of SRL strategies and the perceived motivational beliefs and self-efficacy on their writing test scores. Simultaneous regression, in which all of the variables are added into the regression equation, was applied. This approach is most appropriate when there is no logical or theoretical basis for considering any variable to be prior to any other, either in terms of a hypothetical causal structure of the data or in terms of its relevance to the research goals (Raykov & Marcoulides, 2008).

Assumptions of multiple regression analysis were first examined in terms of sample size, linear relationship, multivariate normality, multicollinearity and homoscedasticity. A rule of thumb for the sample size requires at least 20 cases per independent variable in the analysis (Field, 2009). Bivariate scatterplots and outliers were checked for evaluating the linear relationship between the independent and dependent variables. It needs to be pointed out that multiple regression procedures are not greatly affected by minor deviations from this assumption. For evaluating the normality, histograms and Q-Q-Plots were checked in order to inspect the distribution of the residual values. Correlations of predictors (independent variables) were examined for checking multicollinearity. Visual examination of a plot of the standardised residuals (the errors) by the regression standardised predicted value for examining homoscedasticity.

Given the sample size, three independent models were proposed to investigate the predictive effect of SRL strategies, motivational beliefs and self-efficacy on their writing test scores respectively. The DV was students' writing test scores collected at the pre-test. IVs were listed as follows:

Model 1: text processing, knowledge rehearsal, idea planning, goal-oriented monitoring, peer learning, feedback handling, interest enhancement, motivational self-talk and emotional control;

Model 2: task value, intrinsic goal orientation, extrinsic goal orientation, control of learning beliefs and test anxiety; and

Model 3: linguistic self-efficacy, performance self-efficacy and self-regulatory efficacy.

5.4.3.5 Effect size

Effect size is a useful measure of the magnitude or the size of the observed effect of an independent variable on a dependent variable (Fritz, Morris, & Richler, 2012). Effect size was also reported to evaluate how much IV had affected the DV. Knowing the magnitude of an effect allows us to ascertain the practical significance of statistical significance. Although there are different ways to examine the effect sizes, this study reports the partial eta-squared η^2 for MANOVA, coefficient r for Pearson correlations and Cohen's d for t -test (paired samples t -test and independent samples t -test). In addition, Cohen's f^2 was used for evaluating effect size measures for multiple regressions. Table 5.3 shows the magnitude of effect sizes for different statistics.

Table 5.3 *Summary of Magnitude of Effect Sizes* (J. Cohen, 1988, 1992)

Data Analysis	Effect size	Small	Medium	Large
Bivariate correlation	r	.1	.3	.5
MANOVA/ ANCOVA	η^2	.01	.06	.14
t -test	Cohen's d	.2	.5	.8
Multiple regression	Cohen's f^2	.02	.15	.35

5.5 Phase Two – Strategies-Based Writing Intervention

Phase Two of the main study aimed to investigate how self-regulated strategies-based writing instruction affected students' writing performance, their reported use of SRL strategies and perceived motivational beliefs and self-efficacy. A plethora of empirical research has affirmed the essential role of the self-regulating process in strategies-based writing instruction, particularly the Self-regulated Strategy Development (SRSD) model (Graham & Harris, 1996). A number of studies provide evidence that the SRSD model

can promote self-regulated learners and increase academic outcomes in L1 settings (see also Graham & Perin, 2007, for a detailed review). However, not enough attention has been given to how the SRSD model works in L2 settings, particularly in EFL writing. Informed by the SRSD model, Phase Two of this study, therefore, aimed to implement and evaluate self-regulated strategies-based writing intervention in EFL contexts.

This was a quasi-experimental research design that included two conditions (the experimental group and the control group) with pre-, post- and delayed post-tests. According to Fraenkel et al. (2012), intervention studies contribute to evaluating the “effectiveness of teaching methods, curriculum models, classroom arrangements, and other efforts to influence the characteristics of individuals or groups” (p. 16).

Quantitative data collected from the questionnaires and the writing tests addressed an overarching question:

Did self-regulated strategies-based writing instruction have any impact on the experimental group in terms of writing test scores, the self-reported SRL strategies and the perceived motivational beliefs and self-efficacy? And if yes, how did the experimental group and the control group differ after the intervention ended?

The specific questions are as follows:

- 1) How did the experimental group and the control group differ in writing test scores at the post- and the delayed post-tests?
- 2) How did participants from the two groups differ in their reported use of SRL strategies at the post-test?
- 3) How did participants from the two groups differ in their perceived motivational beliefs and self-efficacy at the post-test?

5.5.1 Instruments

5.5.1.1 Developing Self-regulated Writer Survey

The Developing Self-regulated Writer Survey (the same as in Phase One) was used in this stage to collect the multi-factor data regarding use of demographic information and

the self-reported SRL writing strategies and the perceived motivational beliefs and self-efficacy. All the participants from the two conditions were invited to answer the same survey at the beginning and the end of the intervention with the purpose of examining whether there was any change in these variables (i.e., SRL strategies, motivational beliefs and self-efficacy).

5.5.1.2 Pre-, post- and delayed post-writing tests

Writing tests were used to investigate how the intervention impacted students' writing performance. As for Phase One, writing topics for Phase Two were chosen from TEM 4 past papers. The writing tasks were completed by both the experimental and the control groups prior to and following the intervention and one-month after the intervention. Each administration of the writing test had the same conditions and level of difficulty, but each was on a different topic. Jacobs et al.'s (1981) marking rubric was applied. Appendices I–K show the prompts of the three writing tests. Table 5.4 shows total numbers of writing samples collected from both groups at the pre-, post- and delayed post-tests.

Table 5.4 *Numbers of Writing Samples Collected at the Pre-, Post- and Delayed Post-tests*

Group	Pre-test	Post-test	Delayed post-test
Experimental Group	39	37	34
Control Group	41	38	32

The two raters were invited to evaluate these essays as they did in Phase One. The intra-rater coefficient for Rater One was $r = .92, p < .001$ and for Rater Two was $r = .93, p < .001$ and their inter-rater reliability between the raters was $r = .89, p < .001$, indicating satisfactory reliability.

5.4.1.3 Classroom observations

Classroom observations were undertaken in this phase once a month with both the control group and the experimental group to obtain information about the regular writing teaching and examine whether the instructor strictly followed the intervention

lesson plan. The observation checklist was developed for both control and experimental groups with a focus on teaching practices, the instructional process, writing strategies, classroom activities and students' engagement. Appendix H shows classroom observation scheme.

5.5.2 Self-regulated strategies-based writing instruction

The design of the writing intervention is framed within the Self-Regulated Strategy Development (SRSD; Harris & Graham, 1996). Informed by self-regulation theory and sociocognitive theory, the SRSD is “explicit, systematic and extended” model, which was composed of six recursive stages, encompassing developing and activating background knowledge; discussing; modelling; memorising; support; and independent performance (Harris, Graham, Mason, & Friedlander, 2008). Table 5.5 shows the six recursive processes of the SRSD model with modification.

Table 5.5 *Six Stages of the SRSD Model (Harris et al., 2008)*

Stage 1	Activating background knowledge	<ul style="list-style-type: none"> Develop and activate background knowledge and pre-skills Self-assessment in writing performance
Stage 2	Discussing	<ul style="list-style-type: none"> Describe and discuss writing strategies Task goal-setting Supporting material for strategy use and self-regulation
Stage 3	Modelling	<ul style="list-style-type: none"> The teachers demonstrates the deployment of writing strategies and how to set goal and self-instruction Students personalise the strategy and self-instruction
Stage 4	Memorising	<ul style="list-style-type: none"> The teacher facilitates and assures students' memorising the targeted SRL strategies The teacher scaffolds students' use of the targeted SRL strategies and the teacher's aid gradually fades with the improvement of
Stage 5	Supporting	<ul style="list-style-type: none"> Students evaluate self-regulatory procedure Planning for and maintenance of the strategies are reinforced by the teacher and students
Stage 6	Independent performance	<ul style="list-style-type: none"> Independently practising writing with self-regulation strategies Booster sessions to maintain and generalise the use of writing and self-regulation strategies are enacted

The SRSD model is best characterised as motivating students to engage in learning with active interaction with teachers and peers around them (Graham & Harris, 2005). The major goals of the SRSD are “helping students master the higher-level of cognitive process; develop autonomous, reflective, self-regulated use of effective writing strategies; increase knowledge about the characteristics of good writing; and form positive attitudes about writing and themselves as writers” (Graham & Harris, 1996, p. 352).

This intervention project aimed to apply the SRSD model to the strategies-based instruction in EFL writing contexts with a focus on process writing for fostering strategic writers. Writing instruction was integrated into the regular writing class for its future application and practicality. In order to assure the reliability of strategy instruction, Manchón et al. (2007) pointed out the three crucial factors that influence the effect of instruction: “the teacher’s own training as a good predictor of success; the duration of the programme at least ten and 15 weeks and the inclusion of a metacognitive component” (p. 247). Informed by Manchón et al.’s (2007) recommendation, this study adopted a four-month strategy instruction with teacher training to ensure the reliability of strategy instruction. The intervention emphasised the essential role of self-regulated learning with a focus on metacognitive control and self-reflection throughout the strategy instruction process. During instruction for SRL strategies, all the students in the experimental group were provided with sufficient opportunities to monitor, evaluate and modify their learning strategies as they completed different writing tasks. They were required to evaluate their learning achievement, mastery of knowledge and use of the focused strategies based on their task goals.

The self-regulated strategy instruction model aimed to create a learning environment, where students were encouraged and empowered to take control of their own language learning process. All the language learners were viewed and treated as active collaborators whose learning efforts were emphasised and rewarded. The instructor was required to provide individualised feedback and support to meet students’ needs. Instruction was criterion based rather than time-based in that students moved through each instructional stage at their own pace and did not proceed to later stages of

instruction until they had met initial criteria for doing so. Responsibility for applying and recruiting the target strategies, accompanying knowledge or skills and self-regulation procedures gradually shifted from instructor to students. Instructor and peer support continued throughout the whole intervention until students independently completed a writing task.

The characteristics of the self-regulated strategies-based writing intervention can be summarised as follows:

- Emphasising the instruction in the self-regulation process, in which students were provided with opportunities to reflect on and monitor their own learning;
- Focusing on teacher direction, peer collaboration and self-instruction in writing processes;
- Providing individualised support to students until they could independently perform a writing task.

5.5.2.1 Selection of the targeted SRL strategies

The selection of the targeted SRL strategies was guided by the following criteria. First, the targeted strategies were genre-based and task-driven, which were directly relevant to the teaching syllabus of the writing course in the term when data were collected. Oxford et al. (2014) pointed out that the nature of the task determines the types of learning strategies that can assist in completing the task successfully. As mentioned earlier, participants from both conditions were required to attend a regular writing course which focused on argumentative essay writing. Therefore, the strategies selected were to support text processing, idea planning and peer learning. It was assumed these strategies would help students relieve their cognitive burden and promote their active use of their linguistic knowledge to produce a written text with the facilitation of social support from peers in classroom environments. Second, the selection of the focused strategies was based on the empirical data collected in Phase One. The SRL strategies which had significant predictive effects on writing performance were included, such as text processing, goal-oriented monitoring and idea planning. Third, the selected SRL strategies took reference to the process writing approach with the focus on the pre-during-after composing process. For example, text-processing strategies included

composing and text revising; idea planning was a useful pre-writing activity for generating a high-quality and complex written text; peer learning reflected how students collaborated with peers to ease their cognitive and psychological burden throughout the whole composing process.

Based on above criterion, this study selected four SRL strategies including text processing, idea planning, goal-oriented monitoring and peer learning. The four types of SRL strategies reflected the three dimensions of SRL strategies: cognition, metacognition and social behaviour. Table 5.6 shows a list of the focused dimensions of SRL strategies and rationales.

It also needs to be pointed out that each focused SRL strategies also included subcategories, fitting the specific writing tasks and learning goals as suggested by A. Cohen and Macaro (2007). They argued for the concrete and specific feature of learning strategies based on different tasks and settings. For example, during the instruction of text-processing strategies, the intervention also included some sub-strategies such as POW (pick my idea/organise my notes/writing and say more) for planning and composing; TREE (topic sentence/reasons/explain/ending) for organising the structure of a written draft.

The selected strategies were used in “sequences” or “a cluster” within the six recursive stages of the SRSD model. Students were explicitly and systematically instructed in how to use the self-regulation procedures to manage the use of writing strategies for accomplishing specific writing tasks and to monitor their progress. These practices included treating students as active collaborators in the learning process; adjusting the pace of instruction to meet each student’s needs; and emphasising evaluation of personal progress and mastery, not just learning outcomes.

The self-regulated strategies-based writing instruction was composed of 16 lessons while the control group received the same period of writing courses. Appendix L presents samples of lesson plans for the writing intervention. In order to promote students’ self-regulated competence, task-based metacognitive evaluation checklists were given to students throughout the intervention. For example, when students were

required to check their own writing, they were given a self-revising checklist to provoke their critical reflection on a written draft. See Appendix M.

It should be noted that there were some non-targeted strategies assessed in the pre-test and the post-test as a contrast to the targeted strategies to investigate the change of SRL strategies after the four-month intervention. The inclusion of some non-targeted variables was helpful to evaluate the discriminant validity of the intervention (Bai, 2015). Therefore, five non-targeted strategies that included knowledge rehearsal, feedback handling, interest enhancement, motivational self-talk and emotional control were also assessed. Findings might contribute to a better understanding of whether the intervention has effect on the target variables instead of the effect of the individual differences.

Table 5.6 *Selected SRL Strategies for Self-regulated Strategies-based Writing Intervention*

Dimension	SRL strategies	Rationale	
Cognition	Text processing	<ul style="list-style-type: none"> • Linguistic knowledge usage for the production of a written text 	Linguistic knowledge heavily influences the production of a written text, particularly in L2 contexts.
		<ul style="list-style-type: none"> • Text revising 	Revising is an essential and difficult stage in the writing process. It requires the use of linguistic knowledge and metacognitive control.
Metacognition	Goal-oriented monitoring	<ul style="list-style-type: none"> • Task goal setting 	Writing is a goal-directed process in which writers set up goals, formulate problems and evaluate and plan to satisfy various communicative goals (Cumming et al., 2002). Goal setting improves “attention, motivation and effort. It also facilitates planning and strategic behaviour while promoting self-evaluation and self-determined consequences (Harris et al, 2008, p. 33)
		<ul style="list-style-type: none"> • Self-monitoring • Self-evaluation 	Self-monitoring/evaluation as a part of metacognitive self-regulation, occurs in evaluating performance and the use of strategies. It is important factor to foster self-regulatory capability and arouse positive motivation and interest (Graham & Harris, 1996)
		<ul style="list-style-type: none"> • Self-reflection 	Self-reflection is an essential component of self-regulation. It refers to that students reflect on writing strategies, usefulness, context of using and mastery condition.
	Idea planning	<ul style="list-style-type: none"> • Brainstorming • Mind mapping • Key word association 	Planning is an essential component of Hayes and Flower’s (1996) cognitive writing model. Pre-task planning activities with a focus on L2 writers’ attention on idea generation contribute to the quality and syntactic complexity of written texts (Ellis & Yuan, 2004).
Social Behaviour	Peer learning	<ul style="list-style-type: none"> • Peer discussion • Peer cooperation 	Peer learning reveals the socioculturally situated nature of composing processes (De Guerrero & Villamil, 2000); Peer interaction contributes to constructing a cooperative learning environment (Yu & Lee, 2015).

5.5.2.2 Teacher training

It has been acknowledged that instructors' teaching practices heavily influence the effectiveness of a strategies-based intervention programme (Graham & Harris, 2014; Manchón et al., 2007). As Zimmerman (2008) posited, teacher training enables practical instructors to initiate, support and sustain students' use of, and active engagement in, SRL strategies and the self-regulating process. Therefore, prior to the intervention, a four-week teacher training programme was provided to the two writing teachers in the experimental group. They were invited to attend weekly workshops (two hours per week) to help them learn how to explicitly instruct their students to use different SRL strategies based on the SRSD model. The workshops introduced the writing teacher to several L1 writing theories (e.g., process writing and genre knowledge) and different writing strategies in relation to cognition (e.g., text processing), metacognition (e.g., planning, evaluating and goal setting) and social behaviour (e.g., peer learning). The researcher modelled how to integrate strategy-focused instruction into regular writing courses through a recursive model. The teachers were also instructed in how to activate students' interest and guide students in giving feedback and collaborating with others in classroom activities.

Teacher's role during the instruction was clarified. Sociocultural principles (Donato & MacCormick, 1994; Lantolf & Poehner, 2008) guided the teacher practices throughout the whole instructional process. The teachers were taught how to act a mediator who shouldered the most responsibility in activating knowledge and modelling. Teacher training included, for example, at the activating stage, instructors were required to help students to warm up and activate their background knowledge. In this stage, the teacher's role was to raise students' awareness of their strategy use. In the activating process, the teachers were suggested to generate more questions to arouse students' critical thinking on what strategies were useful for them to solve the writing problems, whether they had applied that kind of strategies with the resources available. The teachers could use think-aloud to demonstrate how, why and when to apply these strategies in learning to write. However, such responsibility became marginalised until student independently applied these strategies actively and also generalised to other learning environments.

After each workshop, the teachers engaged in collective and critical reflection about their teaching practices, the possibility of integrating the targeted writing strategies and writing theories into their regular writing classroom and the practical constraints they might encounter if they implemented the strategy-focused instruction in their class. The researcher discussed these challenges and worked together with the teachers to find out some possible solutions and adjusted the instructional process, if necessary.

5.5.3 The Hawthorn effect

The Hawthorne effect concerns research participation, the consequent awareness of being studied and possible impact on behaviour (McCambridge, Witton, & Elbourne, 2014). In the quasi-experimental study, this effect suggests that participants in the experimental group may aware that they are being studied or receiving more attention from researchers. Therefore, these participants may change their behaviour, such as working harder and performing better rather than because of any manipulation of independent variables. In order to mitigate the Hawthorne effect, the following procedures were taken in the design of this study.

First, the post- and delayed post-tests design can lend validity to the effect of the self-regulated strategies-based writing instruction rather than the other confounding factors.

Second, randomisation was guaranteed when assigning the participants to the two research conditions before the intervention. All the participants were recruited from four intact classes and they took the same writing course at the time of the study. Prior to the intervention, they were randomly allocated to the experimental group and the control group. During the instruction, they received the same length of writing courses with the same textbook and writing tasks in and after class.

5.5.4 Procedures

At the beginning of the term, all the student participants from the two groups were invited to complete the Developing Self-regulated Writer Survey to collect their demographic information, the reported use of SRL strategies and the perceived motivational beliefs and self-efficacy in EFL writing. A purposive sampling was adopted to keep representative and informative about the research. All the respondents

were briefed on the purpose of the study and informed of their rights to withdraw from the research at any time during or after the data collection stage. They were assured that there was no evaluation of their academic performance and participation or non-participation did not influence their grades. On average, participants took approximately 25 minutes to complete the whole English survey. The same set of survey was conducted at the end of the intervention as the result of the post-test. Writing tests were given at the beginning, the end of and one month after the intervention with three different topics to examine the change of writing performance.

During the intervention period, participants in the experimental group received the 16-week writing instruction (once a week with 1.5 hours) from 09/2013 to 12/2013. Two EFL teachers were invited to attend a one-month teacher training and after that, they were randomly allocated to the two classes of the experimental group to implement a four-month writing instruction. Participants in the control group received regular writing courses, required by the university curriculum and syllabus (16-week, once a week with 1.5 hour). In order to guarantee the comparability of the two conditions, both groups used the same textbook and have the same in-and-after class writing tasks as well as classroom instruction time. In order to avoid disadvantaging the participants of the control group, the same writing intervention was also provided to these students for free after the research and all resources used in the experiment class were still available to them. During the process, the researcher tried her best to minimise unfavourable consequences to these participants from both groups. If anyone missed the intervention courses or regular courses, it was assured that they would be disadvantaged by this.

In order to obtain more information about the real situation in class, classroom observation was administered to both the experimental group and the control group monthly as a way to track and evaluate classroom practices. The researcher had observed the classes four times for each group with keeping observation protocol during the research period. The class observation on the experimental group and the control group was made based on the field note and an observation checklist for each lesson that furnished step-by-step directions (see Appendix H).

Overall the testing and instruction took place over a 6-month period. Table 5.7 shows an overview of the intervention.

Table 5.7 *An Overview of Self-regulated Strategies-based Writing Intervention*

Group	Participants	Instructor	<i>N</i>	Course frequency	Content
Experimental Group	Undergrad English major (Second-year level)	Two trained EFL teachers	39	Once a week with 1.5 hours (16 week)	Regular writing course integrated with self-regulated strategies-based writing instruction
Control Group	Undergrad English major (Second-year level)	Two EFL teachers	41	Once a week with 1.5 hours (16 week)	Regular writing course

5.5.5 Data analysis

For the qualitative data collected in the classroom observation, field notes were reviewed and transcribed by the researcher with a focus on teaching practices, the instruction of writing strategies, classroom interactions and students' engagement.

Similar to the procedure in the previous stages, quantitative data collected in this phase via questionnaires and writing tests were first cleaned and normal distribution, missing values and outliers were examined.

5.5.5.1 *Independent-samples t-tests and paired samples t-tests*

The normal distribution of dependent variables (i.e., SRL strategies, motivational beliefs, self-efficacy and writing test scores) were first examined. Three random missing values were removed from the data and no outliers were found. Bivariate scatterplots were also checked, indicating the linear combination of these variables. All these examinations indicate that the assumptions for bivariate analysis were met.

Independent-samples *t*-tests were initially applied to investigate whether there were significant difference in SRL strategies, motivational beliefs, self-efficacy and writing test scores between two conditions at the pre-test.

Then a series of paired samples *t*-tests was applied to explore the possible changes of SRL strategies, motivational beliefs and self-efficacy within each group between the pre- and the post-test.

Cohen's *d* was reported as a way to reveal the effect size (small = 0.2; medium = 0.5; large = 0.8) (J. Cohen, 1988).

5.5.5.2 Analysis of covariance (ANCOVA)

Analysis of covariance (ANCOVA) is a general linear model which blends ANOVA and regression. ANCOVA evaluates whether population means of a dependent variable (DV) are equal across levels of a categorical independent variable (IV), while statistically controlling for the effects of other continuous variables that are not of primary interest, known as covariates (CV) (Coakes et al., 2008). The purpose of ANCOVA is to reduce within-group error variance and eliminate confounds caused by unmeasured variables (Field, 2009).

Given the quasi-experimental nature of the study, a series of ANCOVA with repeated measures was applied with the pre-test scores (i.e., SRL strategies, motivations and self-efficacy) as the covariate in order to remove the pre-existing differences between the two groups. The effect of strategies-based instruction on students' reported use of SRL strategies and perceived motivational beliefs and self-efficacy were subjected to repeated measures of ANCOVA.

The assumption of sphericity and normal distribution were first checked with z scores of the skewness and kurtosis less than the benchmark values $< .3$ (Field, 2009). The assumptions of ANCOVA were checked and the covariate variable (pre-test writing scores) was significantly related to the dependent variables of the post-test and the delayed post-test scores, $r = .740, p < .001$ for the post-test; $r = .687, p < .001$ for the delayed test. The Levene's test was not significant, $F(1, 73) = .681, p = .413$, indicating that the homogeneity of variance assumption was not violated.

The independent variable (IV) was the group and dependent variables (DV) included the nine SRL writing strategies, five motivational beliefs, three sub-factors of self-efficacy. Covariates were average means of these variables collected in the pre-test.

ANCOVA was also used to examine whether there was significant difference in writing test scores collected at the post-test and the delayed post-test between two groups. Covariate was the average means of pre-writing test scores. Partial eta square (η^2) was reported for evaluating the magnitude of effect sizes (small = .01; medium = .06; large = .14) (J. Cohen, 1988).

5.6 Phase Two – Case Study

During the intervention, one high writing-proficiency student and one low writing-proficiency student from the experimental group were invited to attend a case study to evaluate how self-regulated strategy writing instruction affected their understanding of writing motivation and self-efficacy, attitudes towards the treatment and the use of SRL strategies. Case studies often yield an abundance of data to obtain a thick description of a complex social context (Dörnyei, 2007). Data were collected via semi-structured interviews and journals as a way of verifying and complementing the findings from the quantitative data in Phase Two. These qualitative data can provide ample sources and in-depth information in a situated context for investigating a dynamic and recursive activity in the SRL process (Zimmerman, 2011)

These qualitative data were used to address the following three questions:

1. How did the self-regulated strategies-based writing instruction influence the two students' motivational beliefs and self-efficacy?
2. How did the two EFL students view the regular writing teaching and the intervention?
3. How did the self-regulated strategies-based writing instruction influence the two students' view of what makes a good writer and the utility of writing strategies?

5.6.1 Instruments

5.6.1.1 Student Interviews

Semi-structured interviews were conducted to capture dynamic interactions of internal and external variables that influenced the learning and teaching of English writing. Semi-structured interviews are formal “verbal questionnaires”, composed of “a series of questions designed to elicit specific answers from respondents” and gain more insight into people’s ideas, opinion and their experience (Fraenkel et al., 2012, p. 451). The two students from the experimental group were invited to have semi-structured interviews prior to and after the writing intervention. Questions concerned their attitudes toward writing courses, the use of writing strategies, their perception of what makes a good writer, their psychological conditions (e.g., motivation and self-efficacy) and any

challenges they encountered during the learning-to-write process. Appendix N shows interview questions prior to and after the intervention.

5.6.1.2 Writing journals

Writing journals as a form of retrospective measures can have a better access to learners' mental processing and internal changes. In this study, two students from the experimental group were invited to keep writing journals prior to and by the end of the writing instruction. The writing journal was prompt-driven with an aim to record students' changes in relation to their understanding and use of SRL strategies and their psychological development (motivation and self-efficacy) during the intervention. The two students were also invited to express their understanding of the writing intervention regarding the teaching content, procedure, writing tasks and among others.

5.6.2 Procedures

Two student participants from the experimental group were invited to semi-structured interviews prior to and at the end of the writing instruction. Based on their pre-test scores and teacher's evaluation, one student was identified as a high writing-proficiency achiever and the other was a low writing-proficiency achiever. They were interviewed individually in a comfortable place (an empty classroom). All the content or questions were explained in the respondents' first language (Chinese) and their responses were recorded and transcribed verbatim. Guided by the interview journals, student interviews required approximately 20 minutes in Chinese with audio-recording. Students were informed of their right not to answer any questions they did not wish to answer and to have the recorder switched off at any time. They were invited to check the transcription of the interview and told they were entitled to make any change or delete any data without having to give a reason. Participants were informed that confidentiality was assured and if the information provided by participants was reported or published, pseudonyms would be used to protect their identity. The same procedure was also conducted in the post interview at the end of the intervention. Appendix N presents pre- and post-interview schemes. During the intervention, the two participants were required to keep journals in either English or Chinese as stated earlier to reflect any changes

occurred because of the intervention. The researcher collected the copies of these journals by the end of the intervention.

5.6.3 Data analysis

The audio-recordings of student interviews and writing journals were transcribed by the researcher. Once the transcription was done, participants received a copy of the transcript to check and were invited to make any amendments and/or delete any statements. For the purpose of reporting the findings, the transcriptions were translated from Chinese into English. The researcher initially coded the transcription based on the coding scheme generated from the theoretical framework of SRL and overarching research questions in this phase. The dual approach of bottom-up and top-down was employed for the data analysis. The researcher moved between the data and the theoretical perspectives recursively and iteratively to attain a holistic and comprehensive portrayal of the participants' understanding and use of writing strategies, their attitude towards English writing and the writing course as well as their psychological changes in the learning to write process.

In order to increase the trustworthiness and credibility of the data analysis, two experts, who speak Chinese as their mother tongue and possess expertise in L2 writing, were invited to evaluate the preliminary coding and their doubts or questions were addressed. Member checking was also conducted to verify accuracy and authenticity of the translation and the interpretation of the data.

5.7 Summary

This chapter started with an overview of the whole research design, participant information and research measures along with an explanation of ethical considerations throughout the whole study. The second section presented a detailed description of instrument development and validation in the preparatory stage. The ensuing two sections provided a thorough explanation of the main study with a focus on instruments, procedures and data analysis. Phase One of the main study aimed to investigate the use of SRL strategies, motivational beliefs and self-efficacy reported by Chinese EFL students, and how these variables related to their writing performance. Data were

collected from quantitative methods through questionnaires and a writing test. Phase Two endeavoured to explore how the self-regulated strategies-based writing intervention impacted students' writing performance, their reported use of SRL strategies and perceived motivational beliefs and self-efficacy. A mixed-methods approach was used via questionnaires, writing tests, classroom observations. Follow-up case studies were administered to collect in-depth information and triangulate the quantitative data.

CHAPTER SIX

RESULTS OF INSTRUMENT VALIDATION

This chapter presents a detailed account of instrument validation and a description of psychometric properties of the instruments which were used to investigate SRL strategies, self-efficacy and motivation beliefs in L2 writing settings. Then this chapter discusses the core dimensions of SRL strategies and the sub-factors of L2 writing self-efficacy beliefs.

6.1 Writing Strategies for Self-Regulated Learning Questionnaire

6.1.1 Descriptive statistics

Descriptive statistical analyses showed that the mean scores of the 45 items ranged from 3.24 (Item 18) to 5.87 (Item 27) with standard deviations ranging from 1.09 to 1.75. The values for skewness were between -1.36 and .34 and the values for kurtosis were between -1.01 and 2.60 (see Appendix O). They were far less than the cutoff values of ± 3.0 and ± 8.0 for skewness and kurtosis respectively, indicating the univariate normality of the response (Kline, 2011).

Initially, three cases with systematic response bias (e.g., same response for the entire questionnaire) were eliminated. This round of item assessment resulted in the elimination of some irrelevant items with low loading or cross-loading (double/multi-barrelled items). In addition, four cases with missing values were removed without imputation because the total proportion of missing values was about 1%, far less than the cutoff value of 5% (Enders, 2010). Thus, a final sample size of 309 participants for a 45-item scale met the desired cases-to-variables ratio (5:1) analysis (Field, 2009). The assumptions of linearity, singularity and homogeneity of the sample were satisfied and no outlying cases were detected.

6.1.2 Results of exploratory factor analysis (EFA)

The Kaiser-Meyer-Olkin measure verified the sampling adequacy with $KMO = .867$. Bartlett's test of sphericity ($df = 1035$, $p < .001$) indicates that correlations between

items were sufficiently large for an EFA. Empirically and theoretically driven, a maximum likelihood (ML) estimation was performed on the 45 items via oblique rotation, which “allows for the computation of a wide range of indexes of the goodness of fit of the model, permits statistical significance testing of factor loadings and correlations among factors and the computation of confidence intervals” (Fabrigar, Wegener, MacCallum, & Strahan., 1999, p. 277). Given the overestimation issue caused by Kaiser’s criterion (1996) and Cattell’s scree test (Cattell, 1966), this study mainly relied on the parallel analysis because it has been shown to be among the most accurate in retaining components (O’Connor, 2000). Nine predominant factors with more than three indicators each were extracted, explaining 49.05% of the variance. Further assessment resulted in the elimination of some irrelevant items with low loading, complex loading, and hyperplane items. We retained factor loading over .30 using the recommended loading (+/- .30) for the minimal level for interpretability for a sample size of at least 350 subjects or cases (Field, 2009). A total of six items (1, 3, 14, 17, and 42) were excluded from further analysis. See Appendix P for the final version of the WSSRLQ scales with 40 items.

The retention of 40 items was subsequently re-evaluated by using ML estimation and the nine-factor solution was confirmed ($KMO = .889$, $df = 780$, $p < .001$), explaining 50.88% of the total variance. The communalities of all extracted variables were higher than .30, revealing that the extracted factors accounted for a big enough proportion of the variables’ variance. Through the examination of items clustering around each factor, nine conceptually distinct strategies were identified and named: Factor 1 was labelled as *Motivational Self-talk (MST)*, accounting for 23.39% variance; Factor 2, *Goal-oriented Monitoring(GM)*, accounting for 7.64% variance; Factor 3, *Interest Enhancement (IE)*, accounting for 4.63% variance; Factor 4, *Text Processing (TP)*, accounting for 3.70% variance; Factor 5, *Feedback Handling (FH)*, accounting for 3.49% variance; Factor 6, *Peer Learning (PL)*, accounting for 2.68% variance; Factor 7, *Emotional Control (EC)*, accounting for 1.90% variance; Factor 8, *Knowledge Rehearsal (KR)*, accounting for 1.83% variance; and Factor 9, *Idea Planning (IP)*, accounting for 1.62% variance. Table 6.1 shows the oblique rotated solution and results of the ML analysis of the 40-item, nine-factor scale.

Table 6.1 *Factor Loadings for Exploratory Factor Analysis and Internal Reliability of the Nine SRL Strategies (n = 309)*

Factor	Item	Factor Loading									α	
		1	2	3	4	5	6	7	8	9		
Motivational Self-Talk (MST)	MST 1-item 38	.788										.866
	MST 2-item 39	.718										
	MST 3-item 35	.702										
	MST 4-item 34	.700										
	MST 5-item 36	.665										
	MST 6-item 41	.592										
	MST 7-item 37	.561										
	MST 8-item 40	.560										
Goal-oriented Monitoring(GM)	GM 1-item 15		.907									.855
	GM 2-item 16		.869									
	GM 3-item 20		.681									
	GM 4-item 23		.483									
	GM 5-item 22		.451									
	GM 6-item 21		.329									
Interest Enhancement (IE)	IE 1-item 31			.863								.839
	IE 2-item 32			.771								
	IE 3-item 33			.744								
	IE 4-item 30			.619								
Text Processing (TP)	TP 1-item 6				.823							.765
	TP 2-item 4				.643							
	TP 3-item 7				.610							
	TP 4-item 5				.602							
	TP 5-item 8				.595							
	TP 6-item 2				.413							

Note. Items with factor loading of .30 or greater are included; α = Cronbach's alpha.

Continued

Factor	Item	Factor Loading									α	
		1	2	3	4	5	6	7	8	9		
Feedback Handling (FH)	FH 1-item 26					.727						.783
	FH 2-item 27					.722						
	FH 3-item 29					.690						
	FH 4-item 28					.604						
Peer Learning (PL)	PL 1-item 24						.729					.794
	PL 2-item 25						.725					
	PL 3-item 18						.595					
Emotional Control (EC)	EC 1-item 44							.802				.727
	EC 2-item 45							.601				
	EC 3-item 43							.558				
Knowledge Rehearsal (KR)	KR 1-item 12								.800			.737
	KR 2-item 11								.714			
	KR 3-item 13								.432			
Idea Planning (IP)	IP 1-item 10									.652		.701
	IP 2-item 9									.604		
	IP 3-item 19									.379		

Note. Items with factor loading of .30 or greater are included; α = Cronbach's alpha.

Cronbach's alpha coefficient for the nine factors ranged from .701 for Factor 9 to .866 for Factor 1. The internal consistency for the nine strategies met the benchmark value for satisfactory reliability ($\geq .70$), supporting the significant indicator-construct relationship of the instrument.

6.1.3 Results of confirmatory factory analysis (CFA)

Given the sensitivity of SEM to multivariate normality, Mardia's coefficient (1970) was examined and its value obtained in this study was 421.502. The statistic was much less than the recommended value of 1,680, calculated from the formula $p(p + 2)$, where p = total number of observed indicators (Raykov & Marcoulides, 2008), revealing satisfactory multivariate normality. After eliminating four missing values and two response biases, 309 cases were submitted for a series of CFAs. The maximum likelihood (ML) method was adopted to estimate the model's parameters and fit indices. Based on the result of EFA, Model 1, the Ninie-Factor Correlated Model, was generated.

This model specified 40 items into the nine distinct but correlated writing strategies framed within SRL theory. Each indicator was constrained to load only on the factor it was designed to measure. Factor covariances were free to be estimated and error terms associated with each indicator were uncorrelated. Each item-pair measure had a nonzero loading on a specific writing strategy that the questionnaire was designed to measure, and a zero loading on all other factors. Figure 6.1 shows the structure of the Nine-Factor Correlated Model.

The Model 1 was then subjected to several omnibus fit statistical analyses. Due to the sample-size dependency of the chi-square test statistic, we resorted to multiple fit indices in forms of absolute fit indices and incremental fit indices as supplementary (Bentler & Bonett, 1980). Overall, the initial fit of Model 1 revealed an overall satisfactory model fit ($\chi^2_{309} = 1173.273$; $df = 627.417$; $p < .001$; $\frac{\chi^2}{df} = 1.870$; TLI = .895; CFI = .906; RMSEA = .047 [.043, .051]; SRMR = .055; Gamma hat = .093) although TLI was below the acceptable threshold value of .90. Given the minimum item requirement for each factor and the sensitivity of TLI to misspecification and sample size (Fan & Sivo, 2007), no elimination of indicators was conducted. So we accepted the Model 1 with 40 items, as depicted in Figure 6.1.

In this model, all 40-item parameter estimates were statistically significant at $p < .001$ and standardised estimates loadings on the hypothesised latent constructs were higher than the recommended value .50, showing the large effect size (Raykov & Marcoulides, 2008). Table 6.2 shows CFA regression weights for the zero-order correlated model of the nine SRL strategies.

Figure 6.1: The Nine-Factor Correlated Model of SRL Strategies.

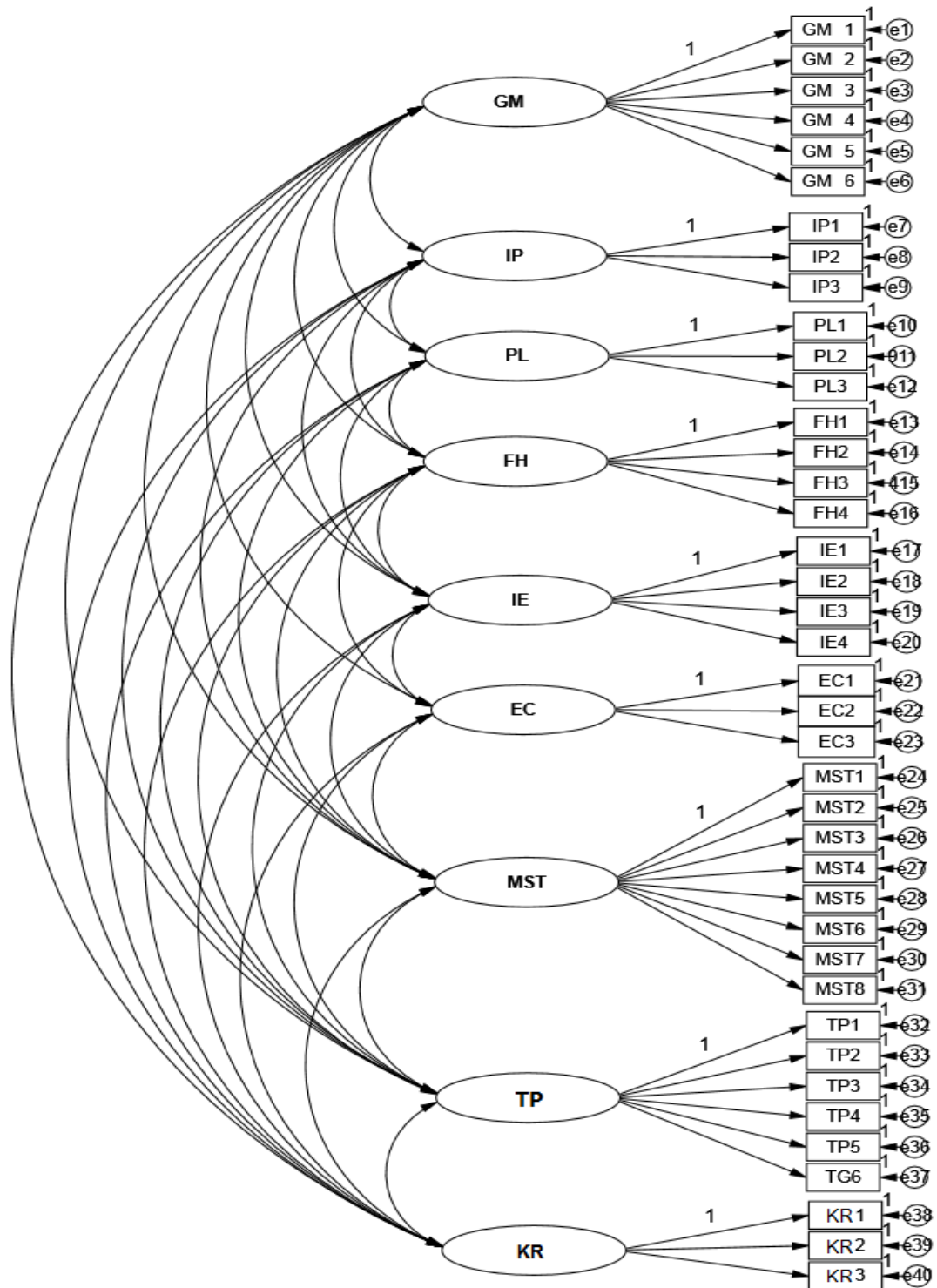


Figure 6.1 The nine-factor correlated model of SRL strategies; GM = Goal-oriented Monitoring; IP= Idea Planning; FH= Feedback Handling; PL=Peer Learning; IE = Interest Enhancement; MST = Motivational Self-talk; EC = Emotional Control; TP = Text Processing; KR = Knowledge Rehearsal.

Table 6.2 *CFA Regression Weights for the Nine-Factor Correlated Model of SRL Strategies*

	Unstandardised Estimate	Standardised Estimate	C.R.
Item 34-MST4	1.000 ^a	.631	a
Item 35-MST3	1.273	.721	9.943***
Item 36-MST5	1.201	.727	9.981***
Item 37-MST7	1.186	.714	9.885***
Item 38-MST1	1.087	.621	9.120***
Item 39-MST2	1.206	.734	10.033***
Item 40-MST8	1.102	.676	9.589***
Item 41-MST6	.992	.637	9.267***
Item 33-IE3	1.000 ^a	.744	a
Item 32-IE2	1.101	.798	14.81***
Item 31-IE2	1.054	.752	14.025***
Item 30-IE4	.926	.718	13.407**
Item 45-EC2	1.000 ^a	.695	a
Item 44-EC1	1.324	.804	11.785***
Item 43-EC3	1.003	.583	9.748***
Item 2-TP6	1.000 ^a	.544	a
Item 4-TP2	.948	.541	8.025***
Item 5-TP4	1.128	.553	8.159***
Item 6-TP1	1.442	.759	9.748***
Item 7-TP3	1.218	.685	9.288***
Item 8-TP5	.975	.589	8.502***
Item 11-KR2	1.000 ^a	.703	a
Item 12-KR1	.957	.738	11.015***
Item 13-KR3	.832	.655	10.366***
Item 15-GM1	1.000 ^a	.719	a
Item 16-GM2	1.014	.732	13.672***
Item 22-GM4	.945	.698	13.039***
Item 23-GM5	.871	.614	11.484***
Item 20-GM3	1.033	.771	14.361***
Item 21-GM6	.944	.705	13.164***
Item 9-IP2	1.000 ^a	.574	a
Item 10-IP1	.866	.643	8.024***
Item 19-IP3	1.115	.673	7.985***
Item 26-FH1	1.000 ^a	.695	a
Item 27-FH2	.911	.721	11.549***
Item 28-FH4	.902	.623	10.306***
Item 29-FH3	.931	.731	11.654***
Item 18-PL3	1.000 ^a	.768	a
Item 24-PL1	1.071	.767	13.542***
Item 25-PL2	1.051	.717	12.889***

Note. *** = $p < .001$; “a” means the regression weight was fixed at 1.00 for model identification purpose hence no critical ratio was computed. MST = Motivational Self-talk; GM = Goal-oriented Monitoring; IE = Interest Enhancement; TP = Text Processing; EC = Emotional Control; KR = Knowledge Rehearsal; IP = Idea Planning; FH = Feedback Handling; PL = Peer Learning.

The discriminant validity was evidenced by the small to moderately strong correlations of the nine inter factors ranging from .116 between peer learning (PL) and emotional control (EC) to .566 between goal-oriented monitoring (GM) and idea planning (IP) revealing that these nine factors were clearly correlated but also distinct constructs, as depicted in Table 6.3.

Table 6.3 *Correlation Matrix of the Nine –Factor SRL Strategies*

Factor	MST	GM	IE	TP	FH	PL	EC	KR
MST	1							
GM	.473	1						
IE	.492	.532	1					
TP	.435	.471	.435	1				
FH	.387	.127	.306	.228	1			
PL	.247	.466	.360	.335	.339	1		
EC	.524	.240	.376	.306	.488	.116	1	
KR	.507	.501	.304	.349	.225	.329	.371	1
IP	.450	.566	.536	.533	.323	.378	.399	.374

Note. MST = Motivational Self-talk; GM = Goal-oriented Monitoring; IE = Interest Enhancement; TP = Text Processing; FH = Feedback Handling; PL = Peer Learning; EC = Emotional Control; KR = Knowledge Rehearsal; IP = Idea Planning; All correlations are significant at $p < .01$.

6.1.4 Discussion

The results of EFA and CFA provided substantial evidence for the factorial structure of the instrument, entailing motivational self-talk, interest enhancement, emotional control, goal-oriented monitoring, idea planning, text processing, knowledge rehearsal, feedback handling, and peer learning. In general, not only did the findings support the utility of the WSSRLQ as a measure of SRL writing strategies with satisfactory psychometric properties, but also they revealed that the nine SRL strategies were reliably distinguished on both conceptual and empirical grounds. SEM confirmed that the nine SRL strategies were conceptualised as four distinctive but correlated constructs. The moderate correlations meant that the nine writing strategies were conceptualised as four distinctive but correlated constructs, which corroborated the multi-dimensional

structure of the self-regulatory mechanism. Thus, scores of nine subcategories can be calculated separately to reveal the level of students' perceived use of each writing strategy and collectively summed to represent an individual's overall level of each theoretical category in terms of cognition, metacognition, social behaviour and motivational regulation respectively.

6.1.4.1 Multiple dimensions of SRL strategies

As noted earlier, the SRL mechanism emphasises the proactive engagement in the learning process under the influence of cognitive knowledge, metacognition, motivation, and the social environment (Zimmerman & Schunk, 2011). This study, therefore, discussed the nine strategies from the four dimensions of SRL that included cognition, metacognition, social behaviour and motivational regulation.

Cognitive strategies

Conceptualised as a cognitive construct, the first taxonomy of strategies comprised text processing (Factor 4) and knowledge rehearsal (Factor 8). Text processing with six items reflected students' use of linguistic, rhetorical and discourse knowledge to generate a text (e.g., When writing, I check the structure for logical coherence). Knowledge rehearsal with three items referred to students' actively remembering writing knowledge (e.g., I frequently write useful words and expressions taught in writing courses to help me remember them). The essential role of cognitive strategies in developing SRL capacity has long been recognised (Zhang et al., 2008; Zimmerman, 2013). In previous research, scholars found that skilled self-regulated learners demonstrated a strong capability in utilising cognitive strategies, which were proven to foster active engagement in the learning process and enhance achievement (e.g., Pintrich & De Groot, 1990).

Metacognitive strategies

As kernel components of metacognitive strategies, goal-oriented monitoring (Factor 2) and idea planning (Factor 9) represented the strategies that writers used to prepare for and appraise their writing process to regulate their engagement in a given task so as to optimise learning outcomes (Winne, 2011). Goal-oriented monitoring, with six items,

included an arsenal of strategies such as setting up goals to direct writing activity (e.g., When I learn English writing, I set up goals for myself in order to direct my activities) or monitoring and evaluating the mastery of knowledge and performance (e.g., I evaluate the mastery of the knowledge or skills learned in writing courses). Idea planning, with three items, connoted specific idea-generating behaviour before writing (e.g., Before planning, I think about the core elements of a good composition learned). Some empirical studies have shown that self-regulated students are proficient in monitoring and, if necessary, modify their strategy use and adapt their learning goals in response to shifting task demands (e.g., Zimmerman & Risemberg, 1997).

Social behaviour strategies

Feedback handling (Factor 5) and peer learning (Factor 6) were interpreted together to reflect how learners utilised social-behavioural factors to promote their self-regulatory capability. Feedback handling with four items embraced students' attitude towards teacher and peer feedback (e.g., I try to improve my English writing based on teachers' feedback; I am open to peers' feedback on my writing). Peer learning had three items involving the procurement of help from others in the learning environment and, as such, is also a social interaction (e.g., I discuss with my peers to have more ideas to write). It has been argued that developing self-regulated learners in classroom activities hinges on peer interaction, which contributes to constructing a cooperative learning environment (Zimmerman & Schunk, 2011). The two types of strategies reflect a sociocultural perspective of language learning, revealing how learners transcend knowledge gaps and deal with learning-related issues through seeking help from and collaborating with others (Oxford et al., 2014).

Motivational regulation strategies

The strategies of motivational self-talk (Factor 1), interest enhancement (Factor 3) and emotional control (Factor 7) pertained to the control of affect. Therefore they were classified under motivational regulation and the hypothesis was confirmed by the SEM results. In this questionnaire, motivational self-talk, with eight items, included the self-encouragement in knowledge mastery (e.g., I persuade myself to work hard in writing courses to improve my writing skills) and academic performance (e.g., I pay much

attention to writing courses to learn more). Interest enhancement, with four items, reflected students' tendency to make learning more enjoyable (e.g., I look for ways to bring more fun to the learning of writing). Emotional control, with three items, measured learners' efforts to reduce distraction and emotion in their environment (e.g., I find ways to regulate my mood when I want to give up writing). Previous literature has shown that these strategies are helpful to "increase students' level of cognitive engagement, overall level of effort, and subsequent achievement within an academic setting" (Wolter, 1999, p. 285). Suffice it to say that the successful validation of the questionnaire corroborated motivational regulation as an integrated component of SRL, interplaying with cognitive, metacognitive, and social-behavioural factors.

On the whole, this study not only contributes to the assessment of EFL writing strategies but also provides theoretical insights into the multi-dimensional structure of the writing process within an SRL framework. The findings lend support to the claim that writing is a highly cognitive activity under the influence of existing knowledge and skills, affective factors, and social environments (Cumming, 2009; Silva, 1993).

6.2 Second Language Writer Self-Efficacy Scale

6.2.1 Descriptive statistics

The same procedure was conducted in validating the *L2 Writer Self-efficacy Scale (L2WSS)*. Assumptions of normality, linearity and homogeneity of the sample were examined and no outlying cases were detected. Descriptive analysis showed that the average mean scores of these 20 items ranged from 3.973 ($SD = 1.462$) to 5.484 ($SD = 1.325$). The skewness and kurtosis indices were between the cut-off value of $|3.0|$ and $|8.0|$ separately, indicating the normal distribution for the exploratory analysis (Kline, 2010). Appendix Q shows the descriptive analysis of the *L2 Writer Self-efficacy Scale* with 20 items.

Given the sensitivity of missing values and outlier of EFA, two cases were removed due to the systematic response bias (e.g., same response for the entire questionnaire). Three missing values were deleted listwise, meaning the whole cases were excluded from the analysis because the total proportion of missing values was less than 1% so that the

deletion would not result in a substantial decrease (Enders, 2010). Finally, there were 309 cases answering 20 items, which was higher than the case-and-variable proportion for factor analysis (Kline, 2010).

6.2.2 Results of EFA

Maximum likelihood (ML) estimation was performed on the 20 items via oblique rotation with Kaiser Normalization, which analyses on the common variance that a variable shares with other variables and allows for intercorrelations among factors (DeVellis, 2012). The parallel analysis was used to retain components and internal reliability was also evaluated. After removing three items with low loading and low internal correlation, a three-factor model with 17 items was generated, which explained 53% of the total variance with all items loading over the recommendation criterion ($> .30$) (see Appendix R for the finalised version of the L2 Writer Self-efficacy Scale with 17 items).

Based on the theory and related literature, the three factors were labelled as: Factor 1: *Performance Self-efficacy* (25% variance); Factor 2: *Linguistic Self-efficacy* (17% variance); and Factor 3: *Self-regulatory Efficacy* (11% variance). Cronbach's alpha coefficient of internal consistency of the subcategories were much higher than the benchmark (.70), suggesting a robust reliability of the scale. Table 6.4 shows the EFA results and internal reliabilities.

Table 6.4 *Factor Loadings for Exploratory Factor Analysis and Internal Reliability of the Three-factor Self-efficacy (N = 309)*

Factor	Item	Factor Loading			α
		1	2	3	
Performance Self-Efficacy	Item 14-I can understand the most difficult material presented in writing course.	.821			.881
	Item 16-I can understand the most complex material presented by the instructor of the writing course.	.761			
	Item 17-I can do an excellent job on the assignments and tests in the writing course.	.714			
	Item 20-Considering the difficulty of the writing course, the teacher, and my skill, I think can do well in the writing class.	.698			
	Item 19-I can master the writing knowledge and strategies being taught in the writing course.	.675			
	Item 15-I can understand the basic concepts taught in writing course.	.673			
	Item 13-I can an excellent grade in writing course.	.613			
Linguistic Self-Efficacy	Item 4-I can write compound and complex sentences with grammatical structure.		.789		.834
	Item 2-I can correctly use all parts of speech (e.g., nouns, verbs, adjectives, etc.) in writing.		.759		
	Item 3-I can write a simple sentence with grammatical structure.		.694		
	Item 1-I can spell all words correctly in writing.		.673		
	Item 5-I can write a good paragraph with topic sentence or main idea.		.573		
	Item 6-I can write a composition with a clear organisation or structure.		.571		
Self-Regulatory Efficacy	Item 10-I can evaluate whether I achieve my goal in writing.			.774	.786
	Item 8-I can think of my goals before writing.			.749	
	Item 7-I can realise my goal to improve my writing.			.702	
	Item 9-I can think of different ways to help me to plan before writing.			.661	

Note. Items with factor loading of .30 or greater are included; α = Cronbach's alpha.

6.2.3 Results of CFA

CFA was used to examine the three-factor structure generated in EFA using maximum likelihood (ML) estimator. Based on EFA results, a zero-order correlated model was proposed. In this model, each indicator (item) constrained to load only on the factor it was designed to measure, factor covariances were free to be estimated, and error terms associated with each indicator were uncorrelated. Each item-pair measure has a nonzero loading on the subcategories of self-efficacy that the instrument was designed to measure and a zero loading on all other factors. The internal-consistency estimates of reliability (coefficient alphas) were computed and zero-order correlations between the factors were calculated (See Figure 6.2).

Multiple omnibus fit statistical analyses were also applied to evaluate the model fit. CFA results revealed an acceptable model fit ($\chi^2_{309} = 321.052$; $df = 116$; $p < .001$; $\frac{\chi^2}{df} = 2.768$; TLI = .901; CFI = .919; RMSEA = .069 [.060, .078]; SRMR = .062; Gamma hat = .094). In this model, the 17-item parameter estimates were statistically significant at $p < .001$ and standardised estimates loadings on the hypothesised latent constructs were higher than the recommended value .50, showing the large effect size (Raykov & Marcoulides, 2008). Table 6.5 shows regression weights of the three-factor correlated model of self-efficacy.

On the relationships among the three factors, the correlation matrix revealed that all three factors were significantly correlated with moderate degrees in a positive direction as depicted in Figure 6.2. The satisfactory levels of correlations confirmed that these factors were distinct enough but also under the same theoretical construct of self-efficacy, confirming the discriminant validity.

Figure 6.2: The Three-Factor Correlated Model of Self-efficacy

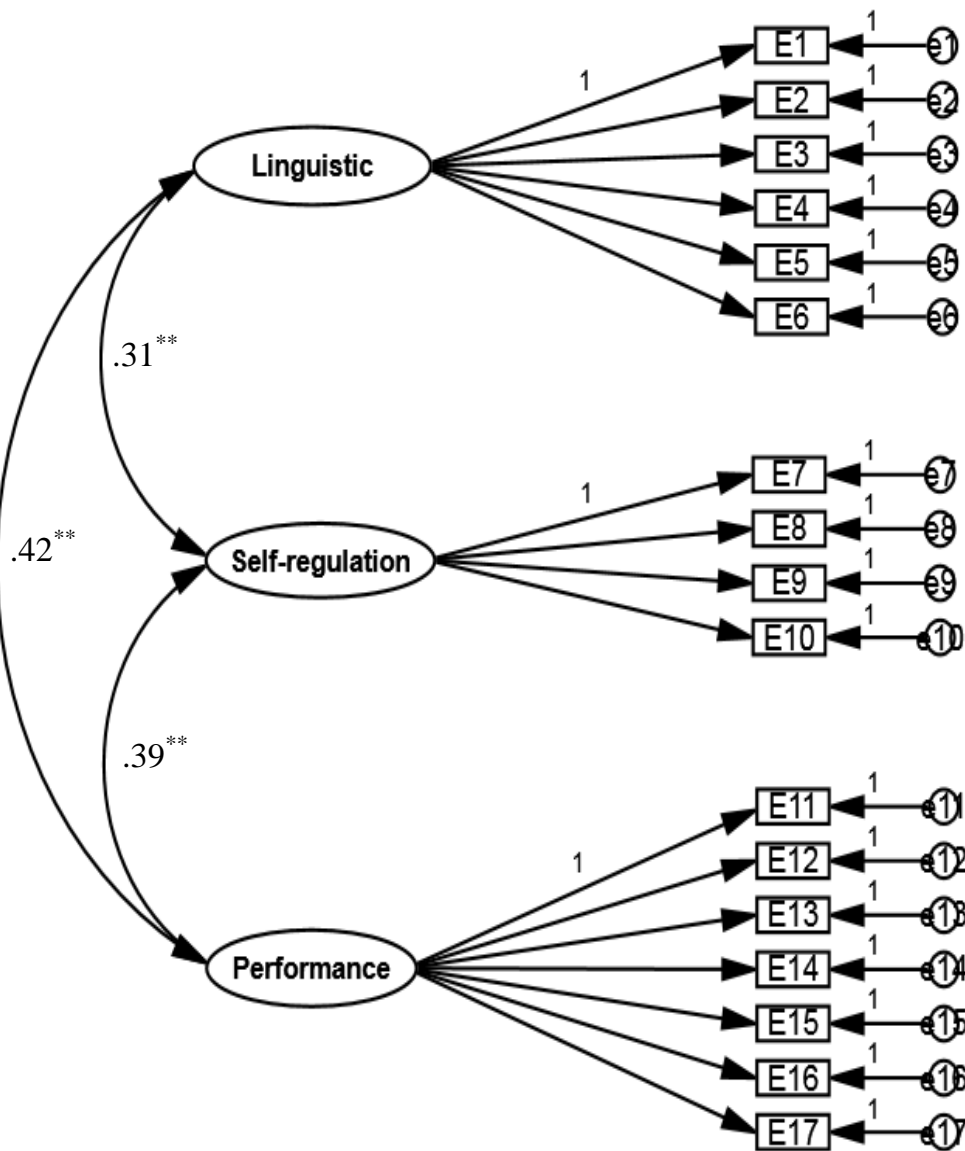


Figure 6.2. Three-factor, zero-order correlated model of self-efficacy; Linguistic = Linguistic Self-efficacy; Self-regulation = Self-regulatory Efficacy; Performance = Performance Self-efficacy; ** = $p < .01$

Table 6.5 CFA Regression Weights for the Three-factor Correlated Model of Self-efficacy

Self-efficacy	Unstandardised Estimate	Standardised Estimate	CR
Item 1-Linguistic	1.000 ^a	.652	a
Item 2-Linguistic	1.221	.780	11.986 ^{***}
Item 3-Linguistic	.882	.625	10.141 ^{***}
Item 4-Linguistic	1.255	.760	11.791 ^{***}
Item 5-Linguistic	.933	.624	10.101 ^{***}
Item 6-Linguistic	.769	.540	8.898 ^{***}
Item 7-Self-regulatory	1.000 ^a	.681	a
Item 8-Self-regulatory	1.217	.760	11.382 ^{***}
Item 9-Self-regulatory	.962	.598	9.602 ^{***}
Item 10-Self-regulatory	1.130	.716	11.015 ^{***}
Item 16-Performance	1.000 ^a	.645	a
Item 11-Performance	1.144	.710	11.585 ^{***}
Item 12-Performance	1.204	.714	11.639 ^{***}
Item 13-Performance	1.359	.755	12.161 ^{***}
Item 14-Performance	1.245	.713	11.617 ^{***}
Item 15-Performance	1.173	.710	11.592 ^{***}
Item 17-Performance	1.288	.750	12.096 ^{***}

Note: ^{***} = $p < .001$; “a” means the regression weight was fixed at 1.000 for model identification purpose hence no critical ratio was computed; Linguistic = Linguistic Self-efficacy; Self-regulatory = Self-regulatory Efficacy; Performance = Performance Self-efficacy

6.2.4 Discussion

As was hypothesised, the EFA solicited a three-dimension structure of L2 writer self-efficacy, which included linguistic self-efficacy, performance self-efficacy and self-regulatory efficacy. More vigorous validation procedures of CFA corroborated the multifaceted structure with robust reliability and validity. The significant correlations with the medium strength indicated that the three dimensions were distinctive but correlated under the same hierarchical construct of self-efficacy.

6.2.4.1 Linguistic self-efficacy

The first dimension, labelled as linguistic self-efficacy, refers to “students’ judgements of their capability to execute the various lexical, syntax, rhetorical, discourse and mechanical skills required to write an effective essay appropriate to their academic

levels (e.g., I can correctly use all parts of speech such as nouns, verbs, adjectives in writing; I can write compound and complex sentences with grammatical structure). Previous studies have found that writers' confidence in their linguistic competence affects their retrieving long-term memory, activating short-term memory and cognitive engagement (Bandura, 1997; Pajares, 2008). In the real composing process, linguistic self-efficacy may refer to an individual's self-judgement of their capability to retrieve words from their long-term memory, use appropriate syntax to express ideas or follow discourse requirements for the production of composing. This indicates that if learners harbour self-doubt in their capability of using linguistic knowledge, their writing performance would be negatively influenced. Although many studies have found the predictive effect of self-efficacy in writing skills on L1 writing performance (see Bruning et al., 2013, for a review), insufficient attention has been given to L2 writing settings. Therefore, it is necessary to explore the relationship of linguistic self-efficacy with other factors such as motivational beliefs, writing performance and the use of SRL strategies in L2 contexts. Findings are expected to provide a better understanding of how students' confidence in their linguistic competence influenced their cognitive development, behavioural transformation and motivational engagement in L2 composing processes.

6.2.4.2 Self-regulatory Efficacy

The second dimension of self-efficacy beliefs is defined as self-regulatory efficacy, which referred to learners' perceived capability to execute metacognitive strategies (planning, monitoring, goal setting) (e.g., I can evaluate whether I achieve my goal in writing). As mentioned earlier, self-regulation is a general construct which includes cognition, metacognition, motivation and social environments (Zimmerman, 2013). This study only focused on learners' confidence in their metacognitive control because self-regulation is a "metacognitive process that requires students to explore their own thought processes so as to evaluate the results of their actions and plan alternative pathways to success" (Usher & Pajares, 2008, p. 443). This specific definition makes self-efficacy beliefs more operational in the complex writing process (Bandura, 2006; Bruning et al., 2013). Previous research has found that the belief for self-regulated learning is an important predictor of students' use of strategies and their academic

performance (Zimmerman & Bandura, 1994; Zimmerman et al., 1992; Usher & Pajares, 2008). As Schunk and Ertmer (2000) argued, a high level of self-efficacy for self-regulating was positively correlated with active engagement in learning activities, more effort giving and longer persistence, which in turn contributed to improving self-regulatory competence. Therefore, the inclusion of self-regulatory efficacy would provide more information about how to increase learners' proactive engagement in learning to write in an L2.

6.2.4.3 Performance self-efficacy

The third dimension was labelled performance self-efficacy, representing students' judgments of their capability to complete the course tasks or mastery of knowledge taught in the course (e.g., I can do an excellent job on the assignments and tests in the writing course). According to Bandura (1997), self-efficacy is a domain-specific construct, which is influenced by the difficulty of a task, the transferability of self-efficacy across the activities and the strength of one's certainty about carrying out a given task. He further argued that evaluating writing self-efficacy should "be linked to the behavioural factors over which people can exercise some control" (Bandura, 2006, p. 310). In addition, based on self-regulatory theory, regulation of behaviour is an important aspect of self-regulation that reflects individuals' attempts to control their own overt behaviour (Pintrich, 2004). Therefore, data collected from performance self-efficacy would reveal how people's beliefs in their capabilities influence their behaviour in a specific domain, such as L2 writing courses. Some researchers (e.g., Pajares & Valiante, 2006) have found that a primary factor that enables writing instruction to forge better writing products and more active writers is to increase learners' beliefs about what and how they can perform as writers when completing different writing tasks in learning to write. Therefore, the empirical exploration of performance self-efficacy is expected to offer insight into how to implement effective writing instruction via maximising learners' own learning agency with more confidence in their task performance.

On the whole, I argued that aligning the measure of self-efficacy with self-regulation theory and a sociocognitive view of writing processes may consolidate the theoretical foundation of exploring sub-dimensions of self-efficacy beliefs. As mentioned earlier,

writing is regarded as a highly demanding cognitive process, which requires coordination and integration of numerous subskills/procedural knowledge at multiple cognitive, metacognitive and linguistic levels (Manchón, 2012; Matsuda & Silva, 2014). The three sub-dimensions of self-efficacy beliefs may provide opportunities to learn more about self-efficacy for writing and the features of L2 writing itself (Bruning et al., 2013).

6.3 Writing Motivational Belief Questionnaire

The Writing Motivational Belief Questionnaire (WMBQ) was adapted from the MSLQ (Pintrich et al., 1991) to investigate the five types of motivational beliefs in EFL writing contexts. Appendix S shows descriptive results of the Writing Motivational Belief Questionnaire (WMBQ).

Given that the MSLQ has been widely validated in many research settings with sound psychometric properties, this study directly applied CFA to evaluate the validity of the modified instrument, WMBQ in EFL environments. This is because CFA is more reliable and valid in assessing the model of instrument if there is more solid theory-foundation underlying it (Kline, 2010). The assumptions of multivariate analysis were evaluated and all criteria were met. The ML method was applied with several omnibus fit statistical analyses. Based on the literature review and theoretical framework of the MSLQ, I hypothesised the same factor structure as designed in the MSLQ in general learning contexts, in which the 22 items were loading onto five factors: intrinsic goal orientation; extrinsic goal orientation; task value; test anxiety; and control of learning beliefs. In this model, each indicator was constrained to load only on the factor that it was designed to measure, factor covariances were free to be estimated and no errors were associated. See Figure 6.3 for the zero-order correlation model of motivational beliefs.

Figure 6.3: The Five-Factor Correlated Model of Motivational Beliefs

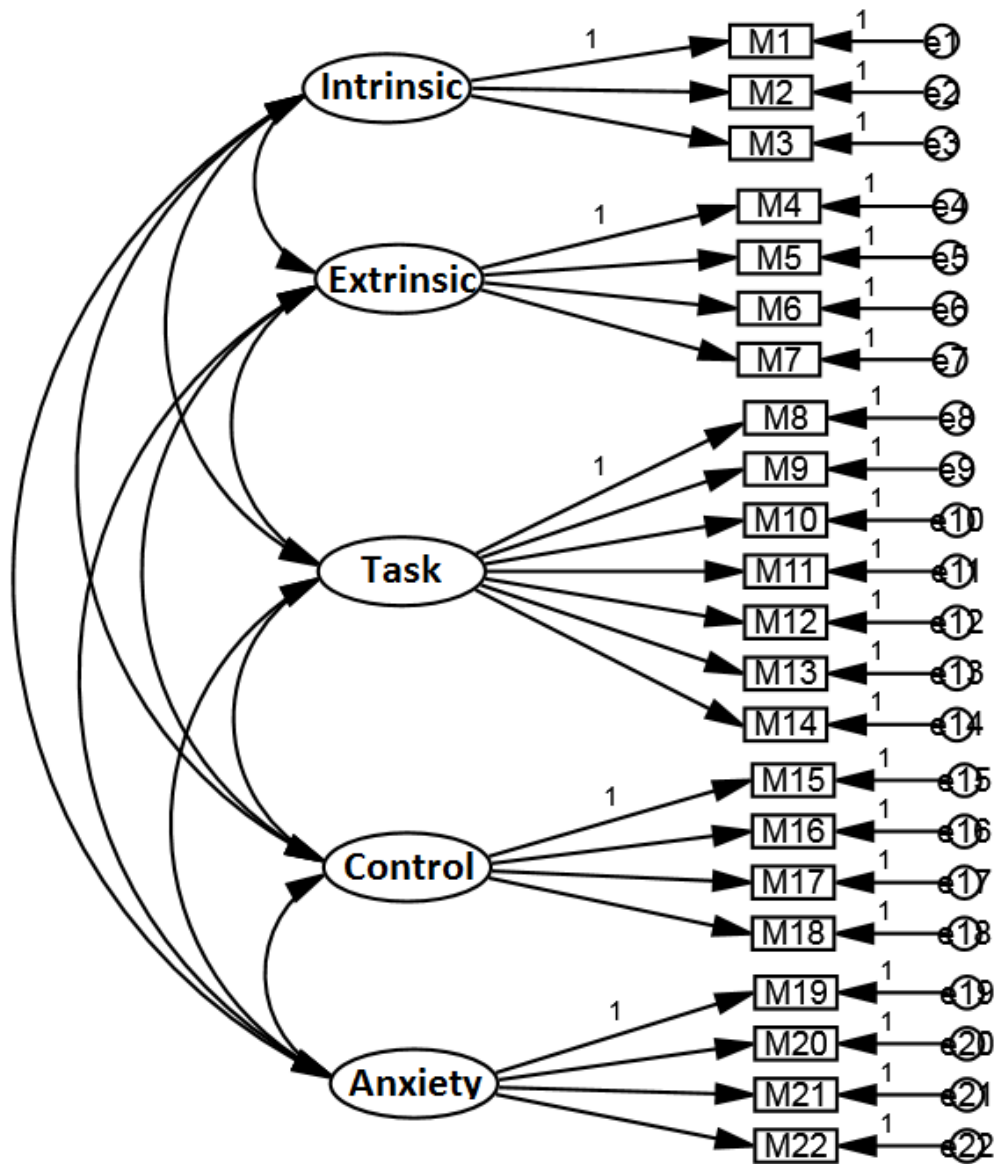


Figure 6.3. The Five-factor, zero-order correlated model of motivational beliefs; Intrinsic = Intrinsic Goal Orientation; Extrinsic = Extrinsic Goal Orientation; Task = Task Value; Control = Control of Learning Beliefs; Anxiety = Test Anxiety.

Overall, the model fit was generally satisfactory ($\chi^2_{309} = 551.598$; $df = 179$; $p < .001$; $\frac{\chi^2}{df} = 2.8$; TLI = .905; CFI = .903; RMSEA = .068 [.061, .075]; SRMR = .074; Gamma hat = .92). In this correlated model, all 22-item parameter estimates were significant at $p < .001$ level and standardised estimates loadings on the hypothesised latent constructs were higher than .50. Table 6.6 shows CFA results of motivational beliefs.

Table 6.6 *CFA Regression Weights for the Five-factor Correlated Model of Motivational Beliefs*

Motivational Beliefs	Unstandardised Estimate	Standardised Estimate	CR
Item 1 Intrinsic Goal Orientation	1.000 ^a	.714	a
Item 2 Intrinsic Goal Orientation	1.038	.805	10.416***
Item 3 Intrinsic Goal Orientation	.618	.644	9.966***
Item 4 Extrinsic Goal Orientation	1.000 ^a	.709	a
Item 5 Extrinsic Goal Orientation	1.132	.679	11.226***
Item 6 Extrinsic Goal Orientation	1.220	.777	12.181***
Item 7 Extrinsic Goal Orientation	.915	.521	8.914***
Item 8 Task Value	1.000 ^a	.612	a
Item 9 Task Value	1.247	.603	8.5258***
Item 10 Task Value	1.568	.669	9.039***
Item 11 Task Value	1.447	.679	9.108***
Item 12 Task Value	1.698	.747	9.548***
Item 13 Task Value	1.571	.763	9.641***
Item 14 Task Value	1.399	.706	9.289***
Item 15 Control of Learning Beliefs	1.000 ^a	.629	a
Item 16 Control of Learning Beliefs	1.006	.521	7.309***
Item 17 Control of Learning Beliefs	1.567	.747	8.721***
Item 18 Control of Learning Beliefs	1.594	.702	8.579***
Item 19 Test Anxiety	1.000 ^a	.615	a
Item 20 Test Anxiety	1.275	.798	11.846***
Item 21 Test Anxiety	1.353	.815	11.978***
Item 22 Test Anxiety	1.230	.784	11.731***

Note: *** = $p < .001$; "a" means the regression weight was fixed at 1.000 for model identification purpose hence no critical ratio was computed.

Table 6.7 shows correlations among these five motivational factors. The adequate range of correlations ranging from -.125 (intrinsic goal orientation and test anxiety) to .415 (extrinsic goal orientation and task value) confirmed the discriminant validity. Taken together, the CFA results indicate that the modified Writing Motivational Belief Questionnaire (WMBQ) is reliable to be used in EFL writing contexts.

Table 6.7 *Correlation Matrix of the Five-factor Motivational Beliefs*

Factor	1	2	3	4	5
1. Intrinsic Goal Orientation	1				
2. Extrinsic Goal Orientation	.118*	1			
3. Task Value	.407**	.415**	1		
4. Control of Learning Beliefs	.316**	.409**	.417**	1	
5. Test Anxiety	-.176**	.149**	.029	-.125*	1

Note. * = $p < .05$; ** = $p < .01$.

6.4 Summary

This chapter presented a thorough description of instrument development and validation. Factor analyses in the form of EFA and CFA revealed a nine-factor correlated model of SRL strategies and a three-factor model of L2 writing self-efficacy. To be specific, the WSSRLQ generated a nine-factor model relating to the lens of cognition, metacognition, social behaviour and motivational regulation, which lends support to the multi-dimensional characteristics of self-regulation. With regards to the self-efficacy scale (L2WSS), a three-factor model was confirmed, which pertained to linguistics, performance and self-regulation. The WMBQ for eliciting motivational beliefs was validated through CFA. Findings confirmed a five-factor correlated model as it was designed in the MSLQ, which entailed intrinsic and extrinsic goal orientation, task value, control of learning beliefs and test anxiety.

CHAPTER SEVEN

RESULTS OF PHASE ONE

This chapter reports findings of Phase One – observational study, which was designed to examine Chinese students' reported use of SRL strategies, their perceived motivational beliefs and self-efficacy as well as writing performance. Data were collected via self-report questionnaires and a given-topic essay writing test to address an overarching research question: *What is the current situation of SRL strategies, motivational beliefs, self-efficacy and writing performance in EFL writing?* The first section reports how SRL strategies related to students' year levels. The following section presents results of the extent to which high writing-proficiency students distinguished themselves from low writing-proficiency students in relation to SRL strategies, motivational beliefs and self-efficacy. The third section provides a detailed description of the correlations between SRL strategies and psychological factors (i.e., motivational beliefs and self-efficacy). The fourth part reports the predictive effects of SRL strategies, motivational beliefs and self-efficacy on students' writing performance. Finally, a thorough discussion is presented in relation to previous findings and SRL models.

7.1 SRL Strategies and Year Levels

Table 7.1 shows descriptive statistics of the nine SRL writing strategies, ranging from 3.603 ($SD = 1.055$) for peer learning to 5.605 ($SD = .916$) for feedback handling.

Paired samples *t*-tests were applied to compare the differences between the four dimensions of SRL strategies and the nine sub-strategies (see Table 7.1).

Table 7.1 *Descriptive Statistics and Results of Paired Samples t-tests of SRL Strategies (N = 389)*

SRL Strategies	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	95% <i>CI</i>		Sub-SRL strategies	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	95% <i>CI</i>	
					<i>LL</i>	<i>UL</i>						<i>LL</i>	<i>UL</i>
Cognitive Strategies	4.491	1.198	92.616	< .001	4.395	4.586	Text Processing	4.512	1.085	82.660	< .001	4.405	4.619
							Knowledge Rehearsal	4.469	1.310	67.826	< .001	4.339	4.599
Metacognitive Strategies	4.085	1.196	83.389	< .001	4.086	4.284	Idea Planning	4.414	1.205	76.081	< .001	4.295	4.534
							Goal Monitoring	3.756	1.183	63.119	< .001	3.639	3.873
Social Behaviour Strategies	4.604	1.142	105.810	< .001	4.519	4.689	Peer Learning	3.603	1.355	52.836	< .001	3.469	3.738
							Feedback Handling	5.605	.916	121.673	< .001	5.515	5.696
Motivational Regulation Strategies	4.924	1.145	109.920	< .001	4.837	5.013	Interest Enhancement	4.611	1.331	68.846	< .001	4.479	4.479
							Motivational Self-talk	4.986	1.041	95.204	< .001	4.883	5.088
							Emotional Control	5.176	1.072	95.952	< .001	5.07	5.282

Note. This is a 7-point Likert scale; 1 = not at all true of me; 2 = not true of me; 3 = slightly not true of me; 4 = neutral; 5 = slightly true of me; 6 = true of me; 7 = very true of me; *CI* = confidence interval; *LL* = lower limit; *UL* = upper limit.

Results showed that all the four dimensions and the nine sub-strategies were significantly different from each other at $p < .001$. Chinese EFL writers reported a high level of using motivational regulation strategies and a medium level of using social behavioural and cognitive strategies. However, they reported using metacognitive strategies at the lowest level.

For the nine sub-SRL strategies, these students reported using emotional control and feedback handling more frequently, followed by text processing, knowledge rehearsal and idea planning. They reported the least preference for using goal-oriented monitoring and peer learning

A multivariate analysis of variance (MANOVA) was performed to examine whether there were significant differences by year levels regarding the nine SRL writing strategies with a 4×9 (Year Levels [freshmen, sophomores, juniors and seniors] \times SRL Strategies [text processing, knowledge rehearsal, idea planning, goal-oriented monitoring, peer learning, feedback handling, interest enhancement, motivational self-talk and emotional control]). Appendix T shows descriptive statistics of the nine SRL strategies by year levels.

Assumptions of the MANOVA were first examined. The Shapiro-Wilk test showed that the mean scores of SRL strategies in the four year levels were roughly normally distributed. This was further confirmed by graphs generated by boxplots and a scatterplot matrix, indicating that the univariate normality was met. Mahalanobis distance was applied to examine multivariate outliers that influenced normality. The Pearson's correlations of dependent variables (nine SRL strategies) were examined as a means of checking multicollinearity. The low to moderate correlations which were far less than the benchmark value ($< .60$) revealed that assumptions for MANOVA were not violated. The Box's Test of Equality of Covariance Matrices was applied to check the assumption of homogeneity of covariance across the groups using $p < .001$ as a criterion.

Results showed that year level was a significant factor influencing the use of SRL strategies, Wilk's $\Lambda = .738$, $F(27, 1119.20) = 4.54$, $p < .001$, partial $\eta^2 = .096$. The multivariate partial $\eta^2 = .096$ means that approximately 9.6% of multivariate variance

of the dependent variables was associated with the year level. This revealed that year difference had a moderate effect on students' reported use of SRL strategies (medium effect size = $.06 < \eta^2 < .13$, J. Cohen, 1988).

Given that Levene's Test of Equality of Error Variance was met with non-significant p values, the follow-up univariate ANOVA was conducted for each dependent variable with an adjusted alpha level. To protect against Type I errors, the Bonferroni procedure was applied to test each ANOVA at the adjusted alpha of .0056 (.05/9; 0.5 divided by the number of ANOVAs conducted, which should be equal to the number of all dependent variables) (Raykov & Marcoulides, 2008).

Results revealed that year levels had significant effects on the reported use of six SRL strategies. There was a medium effect on motivational self-talk strategies ($\eta^2 = .076$) and a small effect on knowledge rehearsal ($\eta^2 = .038$), goal-oriented monitoring ($\eta^2 = .042$), peer learning ($\eta^2 = .047$), interest enhancement ($\eta^2 = .039$) and emotional control ($\eta^2 = .034$) (J. Cohen, 1988). See Table 7.2 for results of MANOVA.

Table 7.2 *Multivariate Analysis of Variance for Effect of Year Levels on the Nine SRL Strategies (N = 389)*

Dependent Variable	$F(3, 389)$	p	Partial η^2
1. Text Processing	2.541	.056	.019
2. Knowledge Rehearsal	5.085	.002	.038
3. Idea Planning	1.572	.196	.012
4. Goal-oriented Monitoring	5.709	.001	.042
5. Peer Learning	6.473	< .001	.047
6. Feedback Handling	3.933	.009	.029
7. Interest Enhancement	5.311	.001	.039
8. Motivational Self-talk	10.676	< .001	.076
9. Emotional Control	4.575	.004	.034

Pairwise comparisons were conducted, controlling for Type I error at the six univariate ANOVAs by testing each at the adjusted alpha level $.0056/6$ (the alpha level for the ANOVA divided by the number of comparisons). Because the assumption of homogeneity of variance-covariance was met, the Tukey HSD post hoc procedure was applied. Table 7.3 shows post hoc results of the six SRL strategies.

Table 7.3 Post Hoc Results of ANOVA of the Six Selected SRL Strategies by Year Levels ($N=389$)

Dependent Variable	Year Level (<i>M</i>)		SE	<i>p</i>	95% <i>CI</i>	
					<i>LL</i>	<i>UL</i>
Knowledge Rehearsal	Year 1 (4.793)	Year 3 (4.128)	.174	< .001	.270	.952
Goal-oriented Monitoring	Year 3 (3.383)	Year 4 (4.182)	.199	< .001	-1.192	-.411
Peer Learning	Year 1 (3.462)	Year 4 (4.242)	.211	< .001	-1.195	-.367
	Year 3 (3.311)	Year 4 (4.242)	.227	< .001	-1.378	-.484
Interest Enhancement	Year 1 (4.752)	Year 3 (4.131)	.176	< .001	.275	.968
	Year 2 (4.790)	Year 3 (4.131)	.187	< .001	.291	1.028
Motivational Self-talk	Year 1 (5.209)	Year 3 (4.530)	.135	< .001	.414	.945
	Year 2 (5.179)	Year 3 (4.530)	.144	< .001	.366	.931
Emotional Control	Year 2 (5.345)	Year 4 (4.746)	.176	< .001	.255	.945

Note. This table only presents results of selected SRL strategies with significant difference at $p < .001$. *CI* = confidence interval; *LL* = lower limit; *UL* = upper limit.

Results showed that the juniors (Year 3) reported using a lower level of five SRL strategies that included knowledge rehearsal, goal-oriented monitoring, peer learning, interest enhancement and motivational self-talk than students from other year levels. Freshmen (Year 1) and sophomores (Year 2) reported a higher level of using motivational regulation strategies (e.g., interest enhancement, motivational self-talk) than the juniors and the seniors. Senior students (Year 4) reported using a higher level

of goal-oriented monitoring and peer learning than Year 1 and Year 3 but a lower level of emotional control than Year 2.

7.2 High Writing-Proficiency and Low Writing-Proficiency Students

A series of independent samples *t*-tests was conducted to explore whether high writing-proficiency students distinguished themselves from low writing-proficiency students in light of SRL strategies, motivational beliefs and self-efficacy. Table 7.4 shows the descriptive results and independent-samples *t*-tests with selected Cohen's *d* values.

Results showed that high writing-proficiency students outperformed their lower writing-proficiency counterparts in using four SRL strategies that included text processing, idea planning, goal-oriented monitoring and motivational self-talk. Writing proficiency difference produced a large effect on the use of text processing (Cohen's *d* = 1.258), a medium effect on goal-oriented monitoring (Cohen's *d* = .697) and motivational self-talk (Cohen's *d* = .652) and a small effect on idea planning (Cohen's *d* = .268) (J. Cohen, 1988).

High writing-proficiency students reported more controls in their learning beliefs and intrinsic goal orientation than low writing-proficiency students. With advanced linguistic competence in writing, they also felt less anxious when taking a test. The writing proficiency difference generated a large effect on control of learning beliefs (Cohen's *d* = 1.134) and test anxiety (Cohen's *d* = 1.510), followed by a moderate magnitude on intrinsic goal orientation (Cohen's *d* = .608).

Those high achievers also demonstrated more confidence in their linguistic self-efficacy with a large effect size (Cohen's *d* = 1.201) and self-regulatory efficacy with a medium effect size (Cohen's *d* = .605) than the low achievers.

The large to medium effect sizes indicate that students' writing proficiency is a critical factor influencing their use of SRL strategies, particularly text processing, their motivational beliefs (intrinsic goal orientation, control of learning beliefs and test anxiety) and self-efficacy beliefs in their linguistic and self-regulation competence (see Table 7.4).

Table 7.4 Descriptive Statistics and Independent Samples *t*-tests of SRL Strategies, Motivational Beliefs and Self-efficacy between High Writing-proficiency and Low Writing-proficiency Students

Variables	High Writing-proficiency			Low Writing-proficiency			95% <i>CI</i>		<i>t</i>	Cohen's <i>d</i>	
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>LL</i>	<i>UL</i>			
SRL Strategies	Text Processing	101	5.047	.921	98	3.733	1.155	.236	1.993	3.631*	1.258
	Knowledge Rehearsal	101	4.643	1.399	98	3.969	1.361	-.545	1.831	1.112	
	Idea Planning	101	4.497	1.421	98	4.176	.921	-1.392	.944	3.242*	.268
	Goal-oriented Monitoring	101	3.974	1.325	98	3.142	.956	-1.491	.510	4.125**	.697
	Peer Learning	101	3.095	1.423	98	3.467	1.235	-1.560	.817	-.684	
	Feedback Handling	101	5.746	.792	98	5.425	.842	-.176	1.219	1.55	
	Interest Enhancement	101	5.196	1.294	98	4.843	.965	-.695	1.437	.713	
	Motivational Self-talk	101	5.469	.637	98	4.943	.946	-.142	1.195	2.210*	.652
	Emotional Control	101	5.262	.953	98	5.533	1.009	-1.110	.567	-.671	
Motivational Beliefs	Intrinsic Goal Orientation	101	5.462	.948	98	4.833	1.115	-.226	1.482	2.142*	.608
	Extrinsic Goal Orientation	101	5.251	1.373	98	5.583	.931	-1.313	.646	-.704	
	Task Value	101	5.263	.782	98	5.083	.894	-.513	.874	.538	
	Control of Learning Beliefs	101	6.051	.705	98	5.111	.936	.258	1.622	2.582**	1.134
	Test Anxiety	101	2.462	1.045	98	4.102	1.125	-2.541	-.745	-3.784**	-1.510
Self-Efficacy	Linguistic Self-efficacy	101	5.577	.989	98	4.472	.831	.345	1.864	3.008**	1.201
	Performance Self-efficacy	101	5.019	1.191	98	4.448	.960	-.329	1.471	1.313	
	Self-regulatory Efficacy	101	4.665	1.144	98	4.063	.819	-.527	1.133	2.012*	.605

Note. This table only reports effect size when *p* is at significant value; * = *p* < .05; ** = *p* < .01; *CI* = confidence interval; *LL* = lower limit; *UL* = upper limit.

7.3 SRL Strategies, Motivational Beliefs and Self-Efficacy

Results of bivariate Pearson correlations with two-tailed significance showed that SRL strategies were significantly correlated with most of the motivational beliefs and self-efficacy (see Table 7.5).

7.3.1 SRL strategies and motivational beliefs

Bivariate correlations revealed that motivational regulation strategies were positively correlated with all the motivational beliefs except for test anxiety. Specifically, motivational self-talk was strongly correlated with task value ($r = .526$) and moderately correlated with intrinsic ($r = .454$) and extrinsic goal orientation ($r = .451$) as well as control of learning beliefs ($r = .399$).

In regard to cognitive strategies, text processing was moderately correlated with task value ($r = .314$) and intrinsic goal orientation ($r = .348$) while knowledge rehearsal was only significantly correlated with task value ($r = .300$). Other correlations, although being significant, were trivial.

Similarly, two types of metacognitive strategies (idea planning and goal-oriented monitoring) had medium correlations with task value and intrinsic goal orientation.

Although feedback handling as a type of social behaviour strategies had significant correlations with all the five motivational beliefs, moderate correlation coefficients were only found with task value ($r = .326$) and control of learning beliefs ($r = .308$) (J. Cohen, 1992).

Also notable is that text anxiety as a category of motivational beliefs was negatively related to text processing, feedback handling and emotional control but positively correlated with knowledge rehearsal, goal-oriented monitoring and peer learning. However, the effect power of these correlations was minimal.

Table 7.5 Correlations of SRL Strategies with Motivational Beliefs and Self-efficacy (N = 389)

Variables		Cognitive strategies		Metacognitive Strategies		Social Behaviour		Motivational Regulation		
		TP	KR	IP	GM	PL	FH	IE	MST	EC
Motivational Beliefs	Task Value	.314**	.300**	.301**	.356**	.212**	.326**	.415**	.526**	.452**
	Intrinsic Goal Orientation	.348**	.178**	.303**	.324**	.102*	.242**	.438**	.454**	.350**
	Extrinsic Goal Orientation	.113*	.209**	.128*	.103*	.043	.174**	.135**	.451**	.202**
	Control of Learning Beliefs	.162**	.150**	.132**	.071	-.071	.308**	.230**	.399**	.396**
	Test Anxiety	-.141**	.120*	-.061	.247**	.295**	-.113*	.015	-.124	-.128*
Self-efficacy	Linguistic Self-efficacy	.405**	.112*	.178**	.138**	-.004	.173**	.234**	.230**	.257**
	Self-regulatory Efficacy	.288**	.245**	.226**	.557**	.300**	.129*	.459**	.265**	.181**
	Performance Self-efficacy	.348**	.224**	.226**	.254**	.05	.212**	.319**	.437**	.382**

Note. TP = Text Processing; KR = Knowledge Rehearsal; IP= Idea Planning; GM = Goal-oriented Monitoring; FH = Feedback Handling; PL= Peer Learning; IE = Interest Enhancement; MST = Motivational Self-talk; EC = Emotional Control; ** = $p < .01$; * = $p < .05$.

7.3.2 SRL strategies and self-efficacy

Table 7.5 shows that the three dimensions of self-efficacy beliefs had significant, positive correlations with all the nine SRL strategies, except for peer learning. Among these, the highest correlation was between goal-oriented monitoring and self-regulatory efficacy ($r = .557$) with a strong effect size and the lowest was between knowledge rehearsal and linguistic self-efficacy ($r = .112$) with a minimal effect size.

Specifically, cognitive strategies, metacognitive strategies and motivational regulation strategies had small to moderate correlations with all the three dimensions of self-efficacy beliefs. For social behaviour strategies, feedback handling was significantly related to the three factors of self-efficacy beliefs with trivial effect sizes but peer learning only had a significant, moderate correlation with self-regulatory efficacy (see Table 7.5 for detailed correlation coefficients)

7.4 Predictive Effects on Writing Performance

Simultaneous multiple regression analyses were used to investigate how SRL strategies, motivational belief and self-efficacy predicted EFL learners' writing performance in three separate models. Assumptions of multiple regressions were first examined. The residuals scatterplots and partial regression plots were checked for evaluating linear relationships between one dependent variable and each of independent variables. Given that the criterion variables in this set of analysis were correlated, a Bonferroni adjustment was adopted to set the alpha level for the overall test of each regression to a more conservative value.

7.4.1 SRL strategies on writing test scores

A simultaneous multiple regression analysis was conducted, in which the nine SRL strategies were entered as a group in one step. Adjusted Bonferroni value was at .005. Results showed that the nine SRL strategies, as a whole, explained approximately 24.3% of the variance in students' writing test scores, $F(9, 389) = 24.251, p < .001, R^2 = .291$, adjusted $R^2 = .284$. The effect size (Cohen's $f^2 = .397$) indicates that the nine SRL strategies as a whole was a strong factor predicting students' writing test performance (strong effect size = Cohen's $f^2 > .35$, J. Cohen, 1992).

Individual predictors of text processing, ideal planning, goal-oriented monitoring and motivational self-talk and feedback handling yielded significant, positive predictions for students' writing performance. None of the other SRL strategies was significantly related to EFL writing performance. See Table 7.6 below.

Table 7.6 *Multiple Regression Results of the Nine SRL Strategies on Writing Test Scores (N = 389)*

Model	B	Beta	p	95% CI	
				LL	UL
1. Knowledge Rehearsal	1.123	.125	.679	-1.743	2.655
2. Text Processing	3.415	.312	< .001	-.234	5.275
3. Idea Planning	1.945	.214	.003	-1.888	2.289
4. Goal-oriented Monitoring	2.256	.203	.001	-5.967	.389
5. Peer learning	-.880	-.113	.472	-3.104	1.455
6. Feedback handling	2.458	.169	.001	-1.437	4.094
7. Interest Enhancement	1.471	.112	.223	-.921	3.862
8. Motivational Self-talk	2.889	.144	< .001	-1.913	5.128
9. Emotional Control	-.988	-.119	.063	-5.933	.160

Note. The dependent variable was writing test score. $R^2 = .291$, Adjusted $R^2 = .284$; CI = confidence interval; LL = lower limit; UL = upper limit.

7.4.2 Motivational beliefs on writing test scores

A simultaneous multiple regression analysis was used to examine how motivational beliefs with five subcategories predicted writing test scores. Adjusted alpha value with a Bonferroni adjustment was .01.

Multiple regression analysis showed that motivational beliefs as a whole accounted for 26.3 % of variance in students' writing test scores $F(5, 389) = 23.462$, $p < .001$, $R^2 = .263$, adjusted $R^2 = .259$. The effect size (Cohen's $f^2 = .349$) indicated that the motivational beliefs as a whole generated a large predictive effect on students' writing test performance (J. Cohen, 1992). Control of learning beliefs made a positive

contribution to the predictive effect on the writing test scores ($\beta = .236, p < .045$) while test anxiety had a negative effect ($\beta = -.272, p = .036$). See Table 7.7.

Table 7.7 *Multiple Regression Results of Motivational Beliefs on Writing Test Scores (N = 389)*

Model	B	Beta	p	95% CI	
				LL	UL
1. Task Value	.676	.123	.531	-3.458	1.802
2. Intrinsic Goal Orientation	.771	.091	.438	-1.482	3.379
3. Extrinsic Goal Orientation	1.689	.219	.203	-3.244	.704
4. Control of Learning Beliefs	2.822	.236	.045	-.427	6.139
5. Test Anxiety	- 3.152	-.272	.036	-3.640	-.125

Note. The dependent variable was writing test score. $R^2 = .263$, Adjusted $R^2 = .259$; CI = confidence interval; LL = lower limit; UL = upper limit.

7.4.3 Self-efficacy on writing test scores

The three factors of self-efficacy beliefs were entered as a group for predicting writing test scores in a multiple regression model. Adjusted alpha value was at .017.

Multiple regression analysis reveals that self-efficacy beliefs together predicted 14.7 % of variance in writing test scores $F(3, 389) = 23.378, p < .001, R^2 = .147$, adjusted $R^2 = .133$, suggesting a medium effect size (Cohen's $f^2 = .172$). In regard to each individual predictor of self-efficacy beliefs, only linguistic self-efficacy made a significant contribution to predicting writing test scores ($\beta = .401, p = .013$).

Table 7.8 *Multiple Regression Results of Self-efficacy on Writing Test Scores (N = 389)*

Model	B	Beta	p	95% CI	
				LL	UL
1. Linguistic Self-efficacy	3.929	.401	.013	.856	7.002
2. Performance Self-efficacy	-.213	-.023	.888	-3.218	2.792
3. Self-regulatory Efficacy	-.291	-.033	.802	-2.605	2.022

Note. The dependent variable was writing test score. $R^2 = .147$, Adjusted $R^2 = .133$; CI = confidence interval; LL = lower limit; UL = upper limit.

7.5 Discussion

Quantitative data collected in Phase One lend empirical support to the belief that, with strong perceived motivation and self-efficacy, EFL writers might become active in utilising a variety of strategies to increase their motivational regulation and cognitive and social engagement in completing academic tasks. Such proactive engagement is expected to contribute to advancing these students' academic performance and developing them into more strategic self-regulated writers (Andrade & Evans, 2013; Zimmerman, 2002).

7.5.1 SRL strategies

The descriptive analysis shows that these Chinese university students reported imbalanced use of SRL strategies at relatively medium levels, which was consistent with some previous findings collected in L2 contexts (e.g., Bai et al., 2014; Zhang, 2008). This may be attributed to pedagogical contexts in Chinese universities, where text-oriented and teacher-centred classroom environments in writing courses might reduce students' interest in, or willingness to, consciously deploy different strategies to facilitate their learning to write in English (Deng et al., 2014; L. Yang & Gao, 2013). Another possible reason may be that these Chinese students lacked the necessary declarative, procedural or conditional knowledge regarding the use of these SRL strategies because strategies-based instruction was not the focus of regular English classes (X. Gao & Zhang, 2011). As Zhang (2008) explained, these university students did not know these strategies or how to use them in the right context to solve the problems they faced in learning to write, even if they knew them or had heard about them before.

Through comparing the four dimensions of SRL strategies, all the respondents reported a greater preference for using motivational regulation strategies, a medium level of social behaviour and cognitive strategies but a low level of metacognitive strategies. However, the order of preference reported in this study is not consistent with the findings in some previous research (Baker & Boonkit, 2004; Lan & Oxford, 2003; Zhang, 2008). For example, Lan and Oxford (2003) found that Taiwanese learners of English used compensation strategies and affective strategies more frequently, followed

by metacognitive strategies, cognitive strategies, social strategies and memory strategies. Baker and Boonkit (2004) found that undergraduate students in a Thai university reported metacognition, cognition and compensation as the most frequently used strategies overall. Zhang et al. (2008) found metacognitive strategies were the most popular strategies used by Singapore primary pupils in reading contexts. These differences in using learning strategies may be attributed to learning contexts in different specific skills (Lan & Oxford, 2003, in general learning contexts; Zhang et al., 2008, in reading), age of participants (Lan & Oxford, 2003, in elementary school; Zhang et al., 2008, in primary school) or cultural differences (Baker & Boonkit, 2004, in Thailand; Zhang et al., 2008, in Singapore). Another reason might be attributed to the instruments used for evaluating students' learning strategies. For instance, Lan and Oxford (2003) used Oxford' (1990) SILL questionnaire, which was designed to evaluate the use of LLSs in general contexts. The instrument was a 5-point Likert scale to explore the frequency of reported strategy use. Zhang et al. (2008) adopted a 7-point Likert scale to investigate students' perceived frequency of using reading strategies in L2 setting. The psychometric differences of these instrument themselves might be one of the reasons, resulting in the variation in the use of LLSs.

The Chinese EFL students in this study reported a relatively high level of motivational regulation strategies, particularly strategies for emotional control. This suggests that Chinese EFL writers tended to use some strategies to regulate their negative emotions in order to stay focused and sustain their efforts when completing a writing task. As discussed in Chapter Two, composing in an L2 is regarded as the most demanding task by many Chinese students (Zhan, 2012; Zhang et al., 2016). Hence, it is not surprising that these Chinese students employed more emotional control strategies to motivate themselves and maintain their leaning effort.

However, these students reported the lowest level of using metacognitive strategies, particularly goal-oriented monitoring in EFL settings. One possible reason is that these Chinese learners have been accustomed to a teacher-dominated learning mode so that they became dependent on teachers' support and guidance rather than actively regulating their own learning by setting up task goals and monitoring their own progress. Alternatively, it has been argued that students experience more challenges

because of the greater cognitive engagement and psychological control required when using metacognitive strategies (X. Gao & Zhang, 2011; Harris et al., 2010). Others have suggested that the low level of using idea planning strategies might be attributed to the fact that many students perceive writing as a non-stop process, thus focusing on producing a whole piece of written text rather than using different ways to generate clear ideas prior to writing (Zhan, 2012; Zhang et al., 2016). The essential role of metacognitive strategies has long been recognised in developing writing competence and fostering self-regulated learners in L2 settings (Baker & Boonkit, 2004; Harris et al., 2010; Zhang, 2010). Therefore, it is necessary to teach these EFL students the value of these strategies and how to apply them in their learning processes in regular writing courses in China.

These EFL writers reported using a medium level of cognitive strategies such as text processing and knowledge rehearsal. The medium level of using text processing strategies might be due to the demanding nature of employing these cognitive strategies. As explained earlier, the text processing strategies in this study not only refer to students' use of linguistic, rhetorical and discourse knowledge in composing, but also the revising processes, reflecting the recursive process of writing from a cognitive view (Hayes, 2012; Hayes & Flowers, 1981). However, many EFL students considered composing to be a one-off behaviour and they were not aware of how to revise what they had written (L. Yang & Gao, 2011). Even though some students were willing to revise their writing, they often felt constrained and powerless due to limited linguistic knowledge or lack of strategy instruction in regular writing courses. Knowledge rehearsal explores how students try to remember what is taught in writing courses, reflecting a certain degree of knowledge memory. As Purdie and Hattie (1996) argued, students from Confucian cultures tended to memorise and practise some cognitive skills. However, this study found a medium level of using knowledge rehearsal strategies in EFL writing. One possible reason is that knowledge rehearsal strategies investigated in this study did not equate to rote or mechanical memorisation but related to how students actively use different strategies to understand what they learn in writing courses. The low level of the reported use of knowledge rehearsal strategy may have reflected students' attribution of less value to what they learned in writing courses.

The medium level of using social behaviour strategies suggests that Chinese EFL students made full use of social environment resources to ease their cognitive and psychological burden in learning to write. One surprising finding is that these students reported a high level of using feedback handling strategies but a low level of peer learning. Feedback handling refers to strategies students used to deal with feedback on their writing from others (e.g., teacher), such as trying to remember or write down others' suggestions and checking mistakes after getting back compositions from teachers. Peer learning, on the other hand, reflects how students seek help from peers to facilitate their learning such as discussing with peer to generate more ideas to write. One possible reason for the high frequency of using feedback strategies is the teacher's dominant position or authority in writing instruction, which might give students an impression that teachers' feedback was an essential resource to help them achieve desirable academic outcomes in writing classrooms. Another reason might be that peer learning strategies in this study explore how students sought help from peers for collaborative learning, such as peer discussion, which is less emphasised in regular writing courses (H. Zhao, 2010; J. Wang, 2014). It still needs to be pointed out that feedback handling strategies in this study explore how students react when they got feedback from others rather than investigate how to give feedback, such as peer feedback. Given the various potential benefits of peer feedback (Lee, 2014), pedagogical attention should, as Bai et al. (2014) argued, be given to "the designing and use of appropriate peer feedback activities to facilitate writing development" (p. 361) However this broader view is not the focus of this study.

7.5.1.2 SRL strategies and year levels

A series of MANOVAs shows that year level had a significant effect on the use of six SRL strategies (i.e., knowledge rehearsal, goal-oriented monitoring, peer learning, interest enhancement, motivational self-talk and emotional control). Freshmen and sophomores tended to deploy a higher level of cognitive strategies (i.e., knowledge rehearsal) and motivational regulation strategies (i.e., interest enhancement, motivational self-talk and emotional control) than juniors and seniors did. For example, the freshmen and sophomores were more likely to use some strategies to enhance their understanding and use of knowledge learned in writing courses, and actively bring more

enjoyment to writing by relating it to their personal interests. They might also use self-talk statements, such as wanting to have a good grade in writing tests (motivational self-talk) as a motive for sustaining their learning efforts. One possible reason might be the effect of the intensive writing courses conducted consecutively within the first two years of university study (see also Chapter Five regarding participants). Direct writing instruction could raise students' awareness of the importance of writing, which may stimulate them to use some strategies to regulate their motivation and sustain their efforts in writing classrooms (J. Zhao, 2011).

Juniors reported using the lowest level of knowledge rehearsal, goal-oriented monitoring, interest enhancement and motivational self-talk than students of other year levels. This might be attributed to the end of the writing courses, which were required in the first two years of undergraduate study. In other words, these EFL students were active to use a range of strategies just for the sake of meeting the requirement of the writing courses such as setting up goals or bringing situational interest to their writing tasks. They would not continue deploying these strategies, indicating the lack of long-term effects of writing courses.

The senior undergraduates reported a much greater use of three SRL strategies (i.e., goal-oriented monitoring, peer learning and interest enhancement) but a lower level of using emotional control strategies. This suggests that these students tended to set up goals to drive or guide their learning; to make full use of peer learning such as peer discussion to help them write; and to connect what they learned with their individual interest to sustain their learning efforts. Such changes reflect that these senior students became more mature in cognitive regulation so that they might not have so strong negative feelings in the learning process as those junior students. On the contrary, they became active in making use of social environments, such as seeking help from peers to facilitate their learning.

Taken together, it is clear that these Chinese EFL students changed the reported use of most of SRL strategies as they entered into high year levels, lending support to Tragant and Victori's (2012) contention that a linear development of strategy use across different proficiency levels may not be warranted. The results reveal the dynamic feature of SRL strategies (Cumming et al., 2007; Zimmerman, 2013). The significant

differences between year levels among the use of SRL strategies also shed light on how to instruct writing strategies while taking the year level variation into consideration for better academic outcomes.

7.5.2 High writing-proficiency and low writing-proficiency students

This study found that the high writing-proficiency students appeared to be better users of text processing, idea planning, goal-oriented monitoring and motivational self-talk than the low writing-proficiency students. However, they reported using a lower level of social behaviour strategies (e.g., peer learning). These findings are not completely consistent with previous studies in other writing contexts (e.g., Bai et al., 2014; Baker & Boonkit, 2004; Gordon, 2008). For example, Bai et al. (2014) found that low-proficiency pupils in Singapore reported using planning, peer learning and affective managing strategies more frequently while the high-proficiency students reported using more planning and text processing strategies. Gordon (2008) found that good L2 writers were more likely to develop strategies to help them have clear goals, stay focused on text production (e.g., ideas, grammar and structure), generate their own writing interest and create opportunities to write outside the classroom. These variations further support the claim that the use of writing strategies may vary across language proficiency levels as well as different learning contexts (Manchón et al., 2007).

The significant difference between the two proficiency groups in terms of using text processing strategies indicates that the high writing-proficiency students took more heed of linguistic regulation such as grammar, lexical, syntactic and mechanics components than the low writing-proficiency students. Similar findings have been reported in previous studies of L2 writing (Chien, 2012; Wong, 2005; Zamel, 1983) as well as general learning contexts (e.g., Pintrich & De Groot, 1990).

Also notable is that these high writing-proficiency students use more metacognitive strategies such as idea planning and goal-oriented monitoring strategies than low writing-proficiency students. However, previous studies have reported inconsistent findings regarding the use of metacognitive strategies, particularly planning. For instance, Sasaki (2000), along with other EFL researchers (Xiu & Xiao, 2006), found that skilled L2 writers tended to extensively deploy more planning strategies. Chamot

and El-Dinary (1999) found that planning strategies were most frequently used by learners regardless of their proficiency level, which was also corroborated by Bai et al.'s (2014) study on Singapore pupils. These differences might be attributed to social contexts including the age of participants. For example, Zhang (2010) found Chinese EFL writers at the tertiary level have been mature enough to use metacognitive strategies that require a high level of cognitive maturity. However, young children such as pupils in Bai et al.'s (2014) study did not develop such abilities to use these strategies regardless of their linguistic level. Despite inconsistent findings, these studies together lend evidence to the essential role of the planning process in the cognitive writing model (Hayes & Flowers, 1981) and the use of planning strategies in producing a good writing (Graham & Perin, 2007; Sasaki, 2000).

The high writing-proficiency students also demonstrated greater preference for using motivational self-talk strategies such as mastery and performance self-talk. This suggests that the students with advanced writing proficiency tended to use goal-directed statements to sustain their learning efforts (e.g., achieving high grades, performing better than peers or improving writing competence). The low writing-proficiency students, on the other hand, tended to have more reliance on using some social behaviour strategies such as seeking help from peers possibly because challenges are experienced due to their low linguistic proficiency, when completing writing tasks.

Despite the observed general pattern between strategy use and writing proficiency, this study also found that EFL students' motivation beliefs and self-efficacy were apparently influenced by their linguistic proficiency. Findings showed that the high-proficiency students reported having more task value, intrinsic goal orientation, and control of learning beliefs in EFL writing. This means that students, who had advanced writing proficiency tended to believe that the writing task was interesting and useful; to approach their course work with an intrinsic goal for learning; and to rate themselves as in control of their own learning. These results lend support to the claim that L2 writers' motivation beliefs, particularly the intrinsic and value aspects, are under the influence of their writing proficiency levels (Boscolo & Hidi, 2007).

Benefited from advanced linguistic competence, the high-proficiency writers had greater linguistic self-efficacy and self-regulatory efficacy than their low-proficiency

counterparts. This reveals that linguistic competence affects students' confidence in using writing knowledge, which may also influence their self-regulatory efficacy to monitor and evaluate their learning process (Li et al., 2013; Schunk & Zimmerman, 2007).

In general, these findings together lend support to the claim that writing proficiency is a significant factor influencing students' potential use of SRL strategies and their perceived motivational beliefs and self-efficacy. In comparison with the low-proficiency students, the high-proficiency writers adopted more text processing strategies; actively engaged with idea planning and goal-directed monitoring; deployed more mastery and performance goals to sustain their learning efforts; displayed a higher value of tasks; and exhibited positive self-efficacy beliefs in their linguistic and regulating competence. All these results help to develop a better understanding of the relationships between L2 writers' proficiency development and individual differences.

7.5.3 SRL strategies, motivational beliefs and self-efficacy

This study found that learners' perceived motivational beliefs and self-efficacy were closely related to their reported use of different SRL strategies. The significant correlations lend support to a sociocognitive view of self-regulation, which emphasises the triadic influence of behaviours, persons and environments in the learning process (Zimmerman, 2013).

As expected, motivational regulation strategies had significant correlations with motivational beliefs, particularly task value and intrinsic goal orientation. Results indicate that students who had more perceived value in their writing task or a clear goal in the learning-to-write process tended to use more strategies to regulate their motivation. As mentioned in Chapter Six, motivational regulation strategies explore how students use different strategies to increase their learning interest, self-motivate themselves for sustaining their learning persistence and actively regulate their negative emotions when they complete a learning task. All these aspects reflect the intrinsic nature of motivation and task-driven orientation, which might explain the moderate correlations between motivational regulation strategies and the two types of motivational beliefs (Wolters & Benzon, 2013).

Results also showed that cognitive and metacognitive strategies were both positively associated with four motivational beliefs (i.e., task value, intrinsic and extrinsic goal orientation and control of learning). However, only task value and intrinsic goal orientation had significant and moderate correlations with these cognitive strategies. This suggests that students, who approached their course work with an intrinsic goal for learning or who believed that the material was interesting and important, were more likely to report using a range of cognitive and metacognitive strategies in learning to write. Similar positive correlations were also found in some previous studies, such as Pintrich et al. (1993), who found that intrinsic goal orientation, task value and control of learning beliefs were positively associated with the use of cognitive and metacognitive strategies.

Feedback handling was significantly correlated with all the five subcategories of motivational beliefs. However, this type of strategy only had a moderate correlation with task value, suggesting that how learners deal with feedback is directly related to their task motivation. In other words, if a learner has more value in a writing task, she/he would take others' feedback on their task performance or written text more seriously. In addition, as Zimmerman (2000) has argued, the significant correlations reveal the essential role of feedback loops in learners' self-regulation process, which in turn affects their writing motivation.

Test anxiety as a category of motivational beliefs was negatively related to text processing and emotional control but positively correlated to peer learning and goal-oriented monitoring. This suggests that students who felt nervous in writing tests tended to seek more help from peers and set up goals to facilitate their learning. Furthermore, students who were not good at utilising their linguistic knowledge or regulating their negative emotions tended to feel nervous when they took a test. These findings indicate that when adult EFL writers know that their academic performance is to be marked, they may feel anxious about their performance and this anxiety, might in turn motivate them to use some strategies to help them relieve such negative emotion.

All the three dimensions of self-efficacy (i.e., linguistic self-efficacy, self-regulatory efficacy and course performance self-efficacy) were significantly correlated with SRL strategies. According to Bandura (1986), self-efficacy is “a generative capability in

which cognitive, social, emotional, and behavioural subskills must be organised and effectively orchestrated to serve innumerable purposes” (pp. 36-37). Hence, learners’ positive confidence in their linguistic, self-regulatory and performance competence might generate motivational support for their cognitive engagement, metacognitive control and motivational regulation when they complete a writing task (Graham, 2007; Zimmerman et al., 1992).

In addition, self-regulatory efficacy was significantly correlated with all the nine SRL strategies with larger effect sizes in comparison with the other two dimensions. In particular, self-regulatory efficacy was strongly correlated with the use of goal-oriented monitoring strategies. According to Zimmerman and Bandura (1994), learners’ belief in their self-regulatory efficacy determines “how well subskills are enlisted, orchestrated, and sustained” (p. 38). This study therefore provides preliminary support for this contention and recognises the salient function of goals in the self-regulating process (Bandura, 1997; Schunk & Ertmer, 2000). Furthermore, the different correlations between the three dimensions of self-efficacy and SRL strategies lend support to a contention that the self-efficacy belief system is “not as an omnibus trait but as a differentiated set of self-beliefs linked to distinct realms of functioning” (Bandura, 1986, p. 36).

7.5.4 Predicting writing performance

7.5.4.1 SRL strategies and writing performance

Multiple regression analyses showed that the nine SRL strategies as a group made a significant, large contribution to predicting writing test scores. This indicates that students who deploy a higher level of using SRL strategies would have a better academic writing performance, thus arguing for the pivotal role of SRL strategies in promoting academic achievement in EFL writing settings (Oxford, 2013).

Of the cognitive strategies, only text processing strategies produced a significant prediction for writing test scores. This suggests that learners’ use of linguistic and writing knowledge is a critical factor affecting their writing performance as revealed in many other studies (e.g., Bai et al., 2015; Zhang, 2008). The result also supports some

studies, which have argued for the essential role of cognitive processes in fostering active engagement in the learning process and enhancing students' writing outcomes (e.g., Hayes & Flower, 1980; Ong & Zhang, 2013; Pintrich & De Groot, 1990). Knowledge rehearsal, however, was not a significant predictor of writing test scores. This means that the remembrance of learning material or course knowledge, as a kind of surface strategy did not have a direct effect on individuals' writing test scores.

Of the metacognitive strategies, goal-oriented monitoring and idea planning were significant predictors of writing test scores, suggesting that these EFL learners who relied on deeper processing strategies were more likely to perform better in writing tests. This indicates that students who use some strategies to generate more ideas (e.g., reading related articles to help write; searching information online for writing) tend to have better scores in writing tests. Consistent with some previous studies on LLSs in general contexts, the results provide empirical credence to the significant effect of planning strategies on L2 writing performance (Bai et al., 2014; Gu et al., 2011; Raimes, 1985; Sasaki, 2000; Victori, 1999).

Goal-oriented monitoring strategies (e.g., setting up goals to direct learning activities; monitoring learning goal in writing courses) also made a significant contribution to students' academic performance, thus providing empirical evidence in favour of the cognitive view of the composing process as a goal-directed activity (Cumming, 2012; Hayes & Flower, 1980). Findings from this phase lend support to the claim that, in the self-regulating process, learners personally "activate and sustain cognitions, affects and behaviours that are systematically oriented toward the attainment of personal goals" (Zimmerman & Schunk, 2011, p. 1).

The findings together corroborate previous argument for the essential role of metacognitive strategies in optimising writing performance in EFL settings (Wu & Liu, 2004; Xiao, 2007). According to Harris et al. (2010), metacognitive strategies contribute to the development of language proficiency and cognitive maturity in developing self-regulated learners. Thus it is necessary to integrate metacognitive strategies, particularly goal-oriented monitoring, into EFL writing classrooms for improving students' writing performance and cultivating more efficient and active learners (Zhang & Zhang, 2013).

Of the motivational regulation strategies, only motivational self-talk was a significant predictor of students' writing performance. As mentioned earlier, motivational self-talk in this study included two aspects: performance self-talk and mastery self-talk. The significant prediction indicates that students who used intrinsic and extrinsic reasons (performance and mastery self-talk) to motivate them to learn and/or sustain their learning efforts tended to perform better in writing tests. This finding mirrors some previous studies conducted in other contexts such as USA (Wolters, 1998, 1999) and German (Schwinger et al., 2009). For example, Wolters' studies found that only performance self-talk produced a weak significant prediction on course grade (1998) and students' GPA (Wolters, 1999). Schwinger et al. (2009) reported that mastery self-talk had an indirect effect on examination performance in German contexts. Although no consistent results have been found, these empirical studies together provide evidence that a higher level of using motivational self-talk strategies contributes to learners' task performance (see e.g., Boekaerts et al., 2000; Dörnyei, 2001).

Of the social behaviour strategies, peer learning did not generate any predictive effect on writing performance. Similarly, Pintrich's (1993) study found that peer learning and help-seeking were not significantly related to the course grades. However, feedback handling yielded a significant, positive effect on students' writing test scores. As Schunk and Zimmerman, (2000) have asserted that, within the triadic cyclical model of SRL, feedback aids individuals' monitoring and self-evaluation in the SRL process, contributing to positive academic outcomes. In general, this study provides tentative support for the impact of social behaviour strategies on an individual's writing performance in EFL settings.

Taken together, the findings of multivariate analyses confirm the important role of SRL strategies in promoting learners' academic performance in EFL writing contexts. The results lend support to some earlier studies on LLSs, for positive predictive relationships between writing strategies and language learning outcomes in general or in specific writing settings (Bai et al, 2014; Baker & Boonkit, 2004; Chien, 2012). A less consistent but perhaps more interesting pattern was the varying predictions of motivational regulation strategies and social behaviour strategies on students' writing test scores. These findings together lend credence to previous arguments that

individuals' learning achievement is directly influenced by their self-regulation of "cognition, motivation, and behavior that mediate the relations between the person, context, and eventual achievement" (Pintrich, 2004, p. 388).

7.5.4.2 Motivational beliefs and self-efficacy on writing performance

Motivational beliefs as a whole were another strong predictor of writing test scores. Among the five types of motivational beliefs, only test anxiety and control of learning had significant effects on students' writing performance. Consistent with Pintrich et al.'s (1993) study, which found that students who reported being anxious about tests were less likely to do well in the writing course, this study found that test anxiety negatively impacted students' writing test scores. In contrast, control of learning beliefs contributed to a better academic outcome, suggesting the essential role of cognitive control in regulating negative emotions in EFL contexts. In general, these results lend some evidence to the salient role of motivational beliefs for promoting positive academic performance in EFL writing as earlier found in L1 and L2 writing (e.g., Cumming et al., 2007; Boscolo & Hidi, 2007). Although only two types of motivational beliefs had direct effects on writing test scores, it appears to be necessary to promote learners' other forms of motivation such as task value and intrinsic and extrinsic goal orientation because a successful writing process requires writers' willingness to devote the personal time and effort to a composing activity driven by their goals, interest and perceived value of a task (Troia et al., 2013; Zimmerman & Risemberg, 1997).

The three sub-dimensions of self-efficacy as a whole generated a significant predictive effect on students' writing test performance, which is consistent with many previous findings (e.g., Bandura, 1997; C. Wang et al., 2014; Pajares, 2009; Pajares & Johnson, 1994; Zimmerman & Bandura, 1994). However, the predictive effect of self-efficacy ($R^2 = .147$; Cohen's $f^2 = .172$) was less than that in some previous studies in L1 setting with ranges from .19 to .40 (Pajares, 2003). This might be attributed to the fact that L2 writing is a much more complex process, which, as argued by Kormos (2012) and Manchón (2014), is under the influence of multiple factors. This study found that linguistic self-efficacy was a significant predictor of students' writing test scores among the three dimensions of self-efficacy. This result mirrors Zimmerman and Bandura's (1994) study, showing that students' increased assurance in their linguistic competence

often brings out positive outcomes in their academic achievement. Zimmerman and Bandura (1994) found that perceived self-regulatory efficacy had both direct and indirect effects on writing course grades. However, some researchers (e.g., Li et al, 2013; Woodrow, 2011) reported the indirect effect of self-efficacy beliefs on writing performance. For instance, Li et al. (2013) asserted that self-efficacy beliefs had a mediation effect on EFL writing performance. Woodrow (2011) also revealed a significant relationship between students' writing performance and anxiety, which was mediated by self-efficacy in EFL writing contexts in China. It is apparent that no consistent agreement has been reached in relation to the relationship between self-efficacy beliefs and academic performance. These differences might be due to the way in which self-efficacy is interpreted and explored as a holistic construct or a multi-dimensional construct. Moreover, the direct and indirect effects of self-efficacy on writing test performance suggests that people's belief in their efficacy is not a static but a dynamic and complex construct, made up of different underlying factors (Bandura, 1986; Bruning et al, 2013; Pajares & Urda, 2006).

7.6 Summary

The above findings showed that Chinese EFL writers reported using different SRL strategies pertaining to cognition, metacognition, social behaviour and motivational regulation at an imbalanced level. These results reveal the necessity to explore SRL strategies from a multidimensional perspective to depict a holistic picture of self-regulation processes (Wolters, 2003; Zimmerman 2013). In addition, students' year level was a significant factor impacting their use of SRL strategies, indicating that language acquisition is a "context-dependent" process with "adaptive", "dynamic" and "nonlinear" features (Cameron & Larsen-Freeman, 2007, p. 233).

Phase One also found that the high writing-proficiency students reported greater use of a range of SRL strategies than their low writing-proficiency counterparts. The findings lend some initial support to the assumption that students' ability to self-regulate their learning is a function of their capacity to effectively use an array of strategies to regulate their cognition, metacognition, behaviour and motivation across diverse academic contexts (Andrade & Evans, 2013; Zimmerman, 2002).

The varying correlations between SRL strategies with motivational beliefs and self-efficacy reveal that the deployment of learning strategies is a complex process under the influence of multiple variables (Zimmerman, 2013). In addition, findings provide somewhat mixed support for the predictive effects of SRL strategies, motivational beliefs and self-efficacy on writing performance. Writing achievement is contingent upon the use of SRL strategies, which play an essential role in mobilising, directing and sustaining learning efforts, therefore, affecting students' academic performance (Manchón et al., 2007). The data from this phase suggests that both motivational beliefs and students' confidence in their capability provide a motivational base for students' effective engagement in academic learning (Pajares, 2008; Wolters & Benzoni, 2013), indicating that the development of strategic writers requires a combined contribution of both SRL strategies and motivational variables (Zimmerman, 2011).

Data from this phase indicate that, in promoting active and efficient learning, "students needed to be taught skills and strategies for managing not only the cognitive aspects of managing learning but also methods in which to motivate themselves for academic pursuits in the face of difficulties or attractive alternatives" (Zimmerman & Bandura, 1994, p. 857). These findings lend empirical support to the sociocognitive view of the learning process, which "acknowledges the social origin of human thought and action, [and] recognises the influential causal contribution of thought processes to human motivation, affect, and action" (Bandura, 1986, p. xii).

CHAPTER EIGHT

RESULTS OF PHASE TWO

This chapter reports and discusses findings of the self-regulated strategies-based writing intervention. A baseline condition of the experimental group and the control group is first reported. The succeeding parts present results of how the intervention impacted EFL students' writing performance, their reported use of SRL strategies and perceived motivational beliefs and self-efficacy. The final section offers a thorough discussion of the results relating to the previous empirical studies and presents a theoretical explanation from sociocognitive and sociocultural perspectives.

8.1 Comparison of Baseline Conditions at the Pre-Test

This section applied bivariate analyses to compare the difference in terms of SRL strategies, motivational beliefs, self-efficacy and writing test scores between the experimental group and the control group at the pre-test. Social factor differences (i.e., age, gender and year of English learning) were also evaluated in this section.

8.1.1 Social factor differences

Descriptive analyses showed that the average ages of students from the experimental group and the control group were $M_{EXP} = 18.875$ ($SD = 1.238$) and $M_{CON} = 18.742$ ($SD = 1.316$). Students from the two groups reported averagely nine years of English learning experience $M_{EXP} = 8.969$ ($SD = 1.177$); $M_{CON} = 9.194$ ($SD = 1.138$). A series of independent samples t -tests was applied to assess the social contextual differences (i.e., age and years of English learning) between the two conditions. Results showed no statistically significant differences among students assigned to the two conditions in terms of age and years of English learning experience (see Table 8.1). Gender comparison between two groups was checked by a Chi-square test of independence and no significant difference was found, $\chi^2(1) = .459, p = .485$.

Table 8.1 *Descriptive Statistics and Results of Independent Samples t-tests of Age and Years of English Learning between the Experimental Group and the Control Group*

Variables	Group	N	M	SD	t	p	95% CI	
							LL	UL
Age	EXP	39	18.875	1.238	.414	.681	-.510	.776
	CON	41	18.742	1.316				
Year of English Learning	EXP	39	8.969	1.177	-.770	.444	-.808	.359
	CON	41	9.194	1.138				

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

8.1.2 Writing test scores

Independent samples *t*-tests found no significant difference in the pre-test writing scores between the experimental group and the control group (see Table 8.2).

Table 8.2 *Descriptive Statistics and Independent Samples t-tests of Writing Test Scores between the Experimental Group and the Control Group at the Pre-test*

Writing Test Score	Group	N	M	SD	t	p	95% CI	
							LL	UL
Content	EXP	39	22.21	3.264	.130	.419	-1.607	1.851
	CON	41	22.10	3.496				
Organisation	EXP	39	15.09	2.151	-.142	.739	-1.184	1.372
	CON	41	15.65	1.723				
Vocabulary	EXP	39	15.36	1.984	.120	.695	-.970	1.033
	CON	41	15.03	1.966				
Language	EXP	39	18.24	2.985	-.529	.724	-1.685	1.209
	CON	41	18.61	2.753				
Mechanics	EXP	39	4.471	.662	-.077	.592	-.336	.368
	CON	41	4.484	.724				
Total Scores	EXP	39	75.06	9.493	-.057	.907	-4.878	4.928
	CON	41	75.84	8.731				

Note. The writing rubric used a weighted scoring scheme on a percentile scale, measuring five aspects of writing performance: content (30%, 13–30), organisation (20%, 7–20), language (25%, 5–25), vocabulary (20%, 7–20) and mechanics (5%, 2–5); CI = confidence interval; LL = lower limit; UL = upper limit.

8.1.3 SRL strategies

Descriptive analysis showed that the average mean scores of the nine SRL strategies reported by the students in the experimental group and the control group fluctuated between 3 (*not true of me*) to 5 (*slightly true of me*). Independent samples *t*-tests revealed no significant differences in the use of all the nine SRL writing strategies between the two groups at the pre-test (see Table 8.3).

Table 8.3 *Descriptive Statistics and Independent Samples t-tests of SRL Strategies between the Experimental Group and the Control Group at the Pre-test*

SRL strategies		Group	N	M	SD	t	p	95% CI	
								LL	UL
Cognition	Text Processing	EXP	39	4.833	1.051	.492	.997	-.413	.650
		CON	41	4.704	1.042				
	Knowledge Rehearsal	EXP	39	4.172	1.324	-.031	.837	-.723	.607
		CON	41	4.181	1.331				
Metacognition	Idea Planning	EXP	39	4.798	1.162	.419	.409	-.529	.738
		CON	41	4.671	1.344				
	Goal-oriented Monitoring	EXP	39	3.763	1.242	1.475	.185	-.184	.976
		CON	41	3.342	1.052				
Social Behaviour	Peer Learning	EXP	39	3.444	1.271	.722	.620	-.451	.897
		CON	41	3.213	1.381				
	Feedback Handling	EXP	39	5.742	.844	.209	.488	-.453	.488
		CON	41	5.692	1.032				
Motivational Regulation	Interest Enhancement	EXP	39	4.886	1.532	.559	.244	-.510	.889
		CON	41	4.691	1.192				
	Motivational Self-Talk	EXP	39	5.229	1.031	.539	.345	-.372	.589
		CON	41	5.121	.854				
	Emotional Control	EXP	39	5.162	1.092	-1.98	.959	-1.053	-.030
		CON	41	5.671	.934				

Note. This is a 7-point Likert scale; 1 = not at all true of me; 2 = not true of me; 3 = slightly not true of me; 4 = neutral; 5 = slightly true of me; 6 = true of me; 7 = very true of me; *CI* = confidence interval; *LL* = lower limit; *UL* = upper limit.

8.1.4 Motivational beliefs and self-efficacy

Independent samples *t*-tests showed that no significant differences were found between the two conditions in terms of intrinsic goal and extrinsic goal orientation, control of learning beliefs and test anxiety. However, there was a significant difference in task value between the experimental group and the control group $t(78) = -2.499, p = .015$ with a small effect size (Cohen's $d = .389$) (J. Cohen, 1988). See Table 8.4 for more information.

Table 8.4 *Descriptive Statistics and Independent Samples t-tests of Motivational Beliefs in the Experimental Group and the Control Group at the Pre-test*

Motivational Beliefs	Group	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	95% <i>CI</i>	
							<i>LL</i>	<i>UL</i>
Task Value	EXP	39	5.043	1.054	-2.499	.015	-1.112	-.151
	CON	41	5.441	.939				
Intrinsic Goal Orientation	EXP	39	5.071	1.184	-.315	.754	-.701	.462
	CON	41	5.161	1.115				
Extrinsic Goal Orientation	EXP	39	5.364	1.088	.519	.605	-.468	.799
	CON	41	5.202	1.397				
Control of Learning	EXP	39	5.556	.992	-.411	.683	-.626	.356
	CON	41	5.656	.961				
Test Anxiety	EXP	39	2.697	1.243	-.404	.688	-.803	.610
	CON	41	2.839	1.557				

Note. This is a 7-point Likert scale; 1 = not at all true of me; 2 = not true of me; 3 = slightly not true of me; 4 = neutral; 5 = slightly true of me; 6 = true of me; 7 = very true of me; *CI* = confidence interval; *LL* = lower limit; *UL* = upper limit.

No significant difference was found between the two groups in the three subcategories of self-efficacy that included linguistic self-efficacy, self-regulatory efficacy and performance self-efficacy (see Table 8.5).

Table 8.5 *Descriptive Statistics and Independent Samples t-tests of Self-efficacy between the Experimental Group and the Control Group at the Pre-test*

Self-efficacy	Group	N	M	SD	t	p	95% CI	
							LL	UL
Linguistic Self-efficacy	EXP	39	5.047	1.033	-.805	.424	-.698	.297
	CON	41	5.247	.939				
Self-regulatory Efficacy	EXP	39	4.474	1.021	.373	.488	-.006	1.053
	CON	41	4.437	1.085				
Performance Self-efficacy	EXP	39	4.842	1.163	.019	.985	-.534	.544
	CON	41	4.835	1.074				

Note. This is a 7-point Likert scale; 1 = not at all true of me; 2 = not true of me; 3 = slightly not true of me; 4 = neutral; 5 = slightly true of me; 6 = true of me; 7 = very true of me; *CI* = confidence interval; *LL* = lower limit; *UL* = upper limit.

Taken together, the statistical analyses revealed that the two groups were comparable in terms of their social factors (i.e., age, year of English learning and gender), SRL strategies, motivational beliefs (test anxiety, intrinsic motivation, extrinsic motivation, control of learning), self-efficacy (linguistics, metacognition and performance) and their writing performance prior to the intervention.

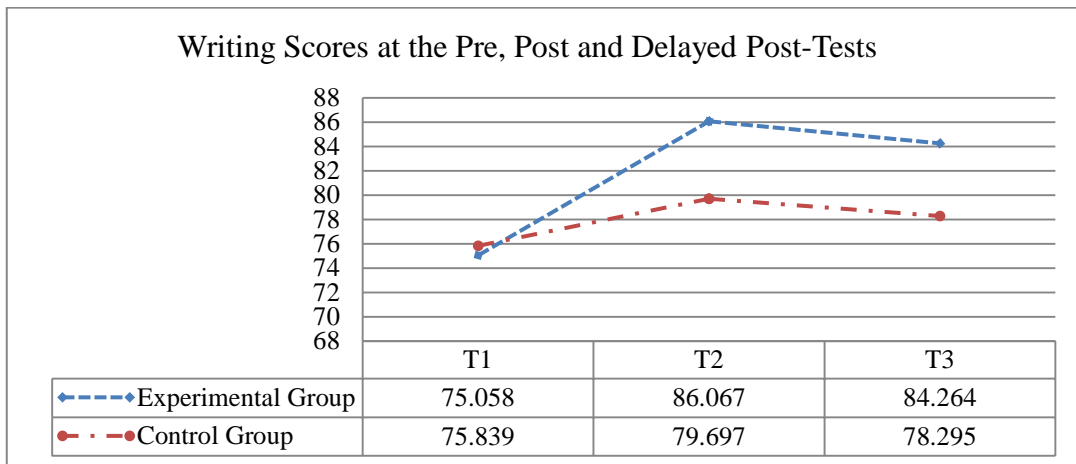
8.2 Strategies-Based Writing Instruction on Writing Performance

This part reports findings of the effect of strategies-based instruction on writing test performance within and between two groups at the post- and the delayed post-tests. First, a series of paired samples *t*-tests was applied to examine the writing score gains within each group. Then analyses of covariance (ANCOVA) with repeated measures were applied to compare the group difference at the post- and delayed post-tests, controlling the pre-test writing score as the covariate in order to remove the pre-existing differences between the two groups.

8.2.1 Writing test score gains within each group

Results showed that both experimental and control groups had increased writing scores at the post-test and the delayed post-test. Figure 8.1 shows an overview of writing scores for the experimental group and the control group at the pre- (T1), the post- (T2) and the delayed post-tests (T3).

Figure 8.1: Results of Writing Scores at the Pre-, Post- and Delayed Post-Tests



A series of paired samples *t*-tests was conducted to compare gains in writing scores at the post- and the delayed post-tests within each group. As shown in Table 8.5, students from both groups demonstrated an obvious improvement in term of their writing outcomes after the instruction. The gains of writing scores at the delayed post-test were continued one month later although the magnitude waned, as revealed in the effect size. Specifically, students from the experimental group had significant gains in the writing test scores at the post-test (Pre- $M_{EXP} = 75.06$, $SD = 9.707$; Post- $M_{EXP} = 86.07$, $SD = 5.84$); $t(36) = 9.02$, $p < .001$ and the delayed post-test (Delayed- $M_{EXP} = 84.26$, $SD = 7.56$); $t(33) = 7.73$, $p < .001$. The effect of gains was strong (Cohen's $d = 2.105$) at the post-test and then became weak but still large at the delayed post-test (Cohen's $d = 1.854$) (J. Cohen, 1988).

Likewise, students from the control group demonstrated improved writing scores at the post-test (from Pre- $M_{CON} = 75.839$, $SD = 8.729$ to Post- $M_{CON} = 79.68$, $SD = 6.678$); $t(37) = 3.01$, $p = .006$ with a medium effect size (Cohen's $d = .494$) and at the delayed post-test (Delayed- $M_{CON} = 78.29$, $SD = 8.45$); $t(37) = 2.08$, $p = .009$ with a small effect size (Cohen's $d = .278$). Table 8.6 shows the descriptive statistics and paired samples *t*-tests of the pre-, post- and delayed post-tests.

Table 8.6 *Descriptive Analysis and Paired Samples t-tests of writing scores at the Pre-, Post- and Delayed Post-tests in the Experimental Group and the Control Group*

Group	Pre-test (T1)			Post-test (T2)			T1vsT2			Delayed Post-test (T3)			T1 vs T3		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	<i>Cohen's d</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	<i>Cohen's d</i>
Experiment	39	75.058	9.707	37	86.067	5.836	9.023	< .001	2.105	34	84.264	5.564	7.734	.006	1.854
Control	41	75.839	8.729	38	79.679	6.678	3.011	< .001	.494	32	78.295	6.45	2.082	.009	.278

8.2.2 Comparison of writing test score gains between two groups

A series of one-way ANCOVAs was conducted to determine whether there were statistically significant differences between the two groups at the post- and the delayed post-writing tests controlling for the pre-test writing scores.

ANCOVA results revealed significant differences in writing scores between the experimental group and the control group, $F(1, 73) = 66.6, p < .001$, partial $\eta^2 = .548$ at the post-test, and $F(1, 64) = 54.26, p < .001$, partial $\eta^2 = .432$ at the delayed post-test.

The covariate was also significant, $F(1, 73) = 42.03, p < .001$, partial $\eta^2 = .433$ for the post-test and $F(1, 73) = 38.45, p < .001$, partial $\eta^2 = .357$ for the delayed post-test. This showed that students' pre-test writing scores had a significant effect on their writing improvement at the post- and the delayed post-tests.

These results revealed that the experimental group outperformed the control group at the post test with a large effect size ($\eta^2 = .548$) (J. Cohen, 1988). The difference was sustained over a month at the delayed post-test, although the difference between the two groups became smaller with the effect size declining to $\eta^2 = .432$. This indicated that the strategies-based instruction had a large effect on writing test performance and such a positive effect sustained until one month later. In addition, students' pre-test writing score was a critical determinant of their writing performance at the post and the delayed post-tests.

8.3 Strategies-Based Writing Instruction on SRL Strategies

As previously stated in Chapter Five, the self-regulation strategies-based writing intervention was designed with a focus on four SRL strategies that included text processing, idea planning, goal-oriented monitoring and peer learning. The selection of these targeted strategies reflected the three dimensions of SRL from the perspectives of cognition, metacognition and social behaviour.

A series of paired samples *t*-tests was first applied to examine whether there was significant change in terms of the nine SRL strategies within each group. Then analyses of ANCOVA were conducted to compare the group difference, with the pre-test score

of each SRL strategy as the covariate. Table 8.7 shows the descriptive statistics of the nine SRL strategies and results of paired samples *t*-tests within each group.

8.3.1 Cognitive strategies

The descriptive statistics showed that the mean scores of text processing strategies (targeted strategy) of the experimental group increased from $Pre-M_{EXP} = 4.833$ ($SD = 1.052$) to $Post-M_{EXP} = 5.152$ ($SD = 1.217$) while the number reported by the control group slightly increased from $Pre-M_{CON} = 4.504$ ($SD = 1.044$) to $Post-M_{CON} = 4.671$ ($SD = 1.196$). A paired samples *t*-test only found a significant increase in the experimental group $t(35) = -1.217$, $p = .043$ with a small effect (Cohen's $d = .289$). No significant change was found in the control group.

The average mean scores of knowledge rehearsal as a non-targeted type of cognitive strategy had a slight increase from $Pre-M_{EXP} = 4.172$ ($SD = 1.318$) to $Post-M_{EXP} = 4.352$ ($SD = 1.316$) in the experimental group and from $Pre-M_{CON} = 4.181$ ($SD = 1.330$) to $Post-M_{CON} = 4.274$ ($SD = 1.577$) in the control group. However, no significant change was found in the reported use of knowledge rehearsal strategies within each group between the pre-test and the post-test (see Table 8.7).

Table 8.7 Descriptive Statistics and Results of Paired Samples *t*-tests of the Nine SRL Strategies at the Pre- and Post-tests in the Experimental Group and the Control Group

SRL Strategies		Group	Pre-test			Post-test			<i>t</i> -test		
			<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	(Cohen's <i>d</i>)
Cognition	Text Processing	EXP	39	4.823	1.052	37	5.152	1.217	1.317	.043	.289
		CON	41	4.504	1.044	38	4.671	1.196	.212	.233	
	Knowledge Rehearsal	EXP	39	4.172	1.318	37	4.352	1.316	1.033	.162	
		CON	41	4.181	1.33	38	4.274	1.577	.575	.572	
Metacognition	Idea Planning	EXP	39	4.798	1.161	37	5.152	.869	1.728	.039	.353
		CON	41	4.671	1.344	38	4.976	.858	.181	.858	
	Goal-oriented Monitoring	EXP	39	3.763	1.237	37	4.263	1.16	2.351	.025	.417
		CON	41	3.342	1.047	38	3.564	1.247	.874	.645	
Social Behaviour	Peer Learning	EXP	39	3.444	1.279	37	3.917	1.298	2.258	.026	.667
		CON	41	3.213	1.382	38	3.56	1.697	1.523	.142	
	Feedback Handling	EXP	39	5.742	.842	37	5.859	1.011	.713	.481	
		CON	41	5.693	1.026	38	5.571	.986	1.044	.306	
Motivational Regulation	Interest Enhancement	EXP	39	4.686	1.531	37	4.889	1.313	2.145	.045	.142
		CON	41	4.692	1.193	38	4.429	1.518	1.071	.294	
	Motivational Self-talk	EXP	39	5.229	1.034	37	5.393	1.01	.947	.351	
		CON	41	5.102	.853	38	5.041	1.039	-.091	.929	
	Emotional Control	EXP	39	5.162	1.091	37	5.583	.927	1.995	.041	.416
		CON	41	5.674	.935	38	5.452	1.027	-.805	.428	

After controlling for the pre-test scores, results of the ANCOVA revealed that there was no significant difference between the two groups in the reported use of text processing, $F(1, 75) = .001, p = .977$, partial $\eta^2 = .000$ and knowledge rehearsal, $F(1, 75) = .539, p = .466$, partial $\eta^2 = .009$. However, the covariate was significantly related to the use of these two strategies at the post-test with $F(1, 75) = 22.534, p < .001$, partial $\eta^2 = .283$ for text processing and $F(1, 75) = 8.234, p = .006$, partial $\eta^2 = .126$ for knowledge rehearsal. This revealed that students' pre-existing level of using cognitive strategies had a large effect on the use of text processing strategies (partial $\eta^2 = .283$) and a moderate effect on knowledge rehearsal (partial $\eta^2 = .126$) (Cohen, 1988).

8.3.2 Metacognitive strategies

Paired samples *t*-tests revealed that there were significant increases in the use of idea planning $t(34) = 1.728, p = .039$, Cohen's $d = .353$ and goal-orientated monitoring $t(34) = 2.351, p = .025$, Cohen's $d = .417$ between the pre-test and the post-test for the experimental group, although the effect sizes of the differences were small. However, no significant change was found in the control group.

Results of ANCOVA showed significant differences in idea planning, $F(1, 75) = 1.833, p = .035$, partial $\eta^2 = .095$ and goal-oriented monitoring, $F(1, 75) = 1.675, p = .023$, partial $\eta^2 = .089$ between the two groups. In addition, the covariate was significantly related to idea planning $F(1, 75) = 32.182, p < .001$, partial $\eta^2 = .361$ and goal-oriented monitoring $F(1, 75) = 25.184, p < .001$, partial $\eta^2 = .306$. This meant that the group difference had a medium effect on the use of two metacognitive strategies (partial $\eta^2 = .095$ for idea planning and partial $\eta^2 = .089$ for goal-oriented monitoring) at the post-test while students' pre-level of using these two metacognitive strategies had a large effect (partial $\eta^2 = .306$).

8.3.3 Social behaviour strategies

Descriptive analysis showed an upward trend in the level of using peer learning strategies in both groups at the post-test was apparent. Feedback handling had a slight increase in the experimental group but a decrease in the control group. However, paired

samples *t*-tests did not reveal any significant changes in terms of using the two social behaviour strategies in each group (see Table 8.7).

Results of ANCOVA demonstrated that the group difference only had a significant, moderate effect on peer learning, $F(1, 73) = 1.699, p = .047$, partial $\eta^2 = .082$. As expected, the covariate was significantly correlated with participants' reported use of peer learning $F(1, 73) = 43.058, p < .001$, partial $\eta^2 = .33$ and feedback handling $F(1, 73) = 19.603, p < .001$, partial $\eta^2 = .256$ at the post-test. This revealed that students' pre-level of using peer learning and feedback handling strategies had a strong effect on their use of these strategies in new learning or writing tasks at the post-test.

8.3.4 Motivational regulation strategies

The students from the experimental group had an increase in using the three motivational regulation strategies that included motivational self-talk, interest enhancement and emotional control at the post-test. However, the control group showed an overall downward trend after the intervention (see Table 8.8).

Paired samples *t*-tests showed that only interest enhancement $t(36) = -2.145, p = .045$, and emotional control $t(36) = -1.955, p = .041$ had significant, small difference between the pre-test and the post-test in the experimental group. The magnitude of these differences was minimal for interest enhancement (Cohen's $d = .142$) and small for emotional control (Cohen's $d = .416$). No significant difference was found in the control group.

Results of ANCOVA demonstrated that the group difference only had a significant effect on interest enhancement, $F(1, 73) = 1.606, p = .038$, partial $\eta^2 = .087$ with a medium effect size. No significant difference was found in motivational self-talk and emotional control between the two groups at the post-test.

As expected, the covariate had significant influence on interest enhancement $F(1, 73) = 13.751, p < .001$, partial $\eta^2 = .194$ and emotional control $F(1, 73) = 6.809, p = .012$, partial $\eta^2 = .107$ with a large effect size.

8.4 Strategies-Based Writing Instruction on Motivational Beliefs

Paired samples *t*-tests showed that the students from the experimental group reported significant differences in task value $t(36) = -2.481, p = .019$, Cohen's $d = .539$ between the pre- and the post-tests. For the control group, no significant difference was found in the five categories of motivational beliefs between the pre- and the post-tests. Table 8.8 presents results of paired samples *t*-tests of motivational beliefs in each group at the pre- and the post-tests.

Results of ANCOVA show that the group difference had a significant, moderate effect on task value $F(1, 73) = 4.658, p = .043$, partial $\eta^2 = .075$ and a small effect on extrinsic goal orientation $F(1, 73) = 1.794, p = .186$, partial $\eta^2 = .031$. No significant difference was found between two conditions in other motivational beliefs at the post-test.

Pre-test scores of each motivational category as covariate showed a significant impact on the post-test scores in test anxiety $F(1, 73) = 12.485, p = .001$, partial $\eta^2 = .180$; intrinsic goal orientation $F(1, 73) = 16.915, p < .001$, partial $\eta^2 = .229$; extrinsic goal orientation $F(1, 73) = 12.004, p = .001$, partial $\eta^2 = .174$; task value $F(1, 7) = 4.412, p = .046$, partial $\eta^2 = .068$ and control of learning $F(1, 73) = 6.866, p = .011$, partial $\eta^2 = .108$. Results of partial η^2 suggested that the covariate difference had a strong effect on test anxiety as well as intrinsic and extrinsic goal orientation; a medium influence on task value and control of learning beliefs.

Table 8.8 *Descriptive Statistics and Results of Paired Samples t-tests of Motivational Beliefs at the Pre- and Post-tests in the Experimental Group and the Control Group*

Motivation Beliefs	Group	Pre-test			Post-test			t-test	
		<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Test Anxiety	EXP	39	2.697	1.243	37	3.067	1.317	.878	.535
	CON	41	2.839	1.557	38	3.089	1.502	.799	.431
Task Value	EXP	39	5.043	1.054	37	5.589	.969	2.481	.019
	CON	41	5.622	.839	38	5.255	1.019	1.612	.119
Intrinsic Goal Orientation	EXP	39	5.071	1.184	37	5.271	1.243	.713	.481
	CON	41	5.161	1.115	38	5.107	1.133	.201	.843
Extrinsic Goal Orientation	EXP	39	5.364	1.088	37	5.609	1.157	1.233	.227
	CON	41	5.202	1.397	38	5.125	1.117	.221	.826
Control of Learning Beliefs	EXP	39	5.556	.992	37	5.771	.912	1.103	.279
	CON	41	5.656	.962	38	5.476	1.041	.882	.387

8.5 Strategies-Based Writing Instruction on Self-Efficacy

A series of paired samples *t*-tests revealed that the experimental group had an increase in linguistic self-efficacy $t(37) = 1.974, p = .042$ with a large effect size (Cohen's $d = .581$) and performance self-efficacy $t(37) = 1.993, p = .044$ with a minimal effect size (Cohen's $d = .132$) at the post-test. No significant difference was found for the three subcategories of self-efficacy in the control group between the pre-test and the post-test (see Table 8.9).

Results of ANCOVA revealed that students in the experimental group reported a higher level of performance self-efficacy $F(1, 73) = 1.932, p = .038$, partial $\eta^2 = .065$ with a medium effect size than the control group at the post-test. This revealed the positive effect of writing intervention on improving students' confidence in their linguistic knowledge.

The ANCOVA yielded evidence of a significant effect of covariate on all the three subcategories with large effect sizes: covariate of linguistics self-efficacy $F(1, 73) = 47.656, p < .001$, partial $\eta^2 = .459$; covariate of self-regulatory efficacy $F(1, 73) = 7.064, p = .010$, partial $\eta^2 = .112$; covariate of performance $F(1, 73) = 56.563, p < .001$, partial $\eta^2 = .503$.

Table 8.9 *Descriptive Statistics and Results of Paired Sample t-tests of Self-efficacy at the Pre- and Post-tests in the Experimental and Control Groups*

Self-efficacy	Group	Pre-test			Post-test			t-test		
		<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	Cohen's <i>d</i>
Linguistic Self-efficacy	EXP	39	5.047	1.033	37	5.672	1.124	1.974	.042	.581
	CON	41	5.247	.939	38	5.161	.919	.985	.333	
Self-regulatory Efficacy	EXP	39	4.266	1.022	37	4.379	1.097	1.326	.154	
	CON	41	4.242	1.085	38	4.286	1.141	.205	.839	
Performance Self-efficacy	EXP	39	4.746	1.074	37	4.883	1.002	1.993	.044	.132
	CON	41	4.71	.865	38	4.964	1.165	.938	.357	

Note. This table only reports effect size with significant *p* value.

8.6 Discussion

This project sought to explore how self-regulated strategies-based writing instruction impacted EFL university students' use of SRL strategies, psychological factors (e.g., motivational beliefs and self-efficacy) and writing performance. Quantitative data analyses suggest that the self-regulated strategies-based writing intervention was effective in improving students' writing performance, extending their active use of SRL strategies and promoting their perceived motivational beliefs and self-efficacy in the learning-to-write process. All these positive effects contribute to developing them into self-regulated writers (Harris et al., 2011; Zimmerman & Bandura, 1994).

8.6.1 Gains of writing test scores

The results of repeated writing tests showed a significant difference between the pre- and post-test scores for both the experimental group and the control group. This reveals that both the regular writing course and the self-regulated strategies-based writing intervention contributed to students' writing performance. The experimental group significantly outperformed the control group in the improvement of writing test scores with a large effect size at the post-test and the delayed post-test. The result indicates that individuals who had received the self-regulation strategies-based instruction tended to achieve a better learning outcome in writing than students who received the regular writing course which did not include strategies-based writing instruction.

Although both groups had significant gains at the delayed post-test, the sustained positive effect was large for the experimental group but minimal for the control group. The significant difference between the two groups at the delayed post-test suggests that the intervention produced a more persistent benefit towards students' writing improvement than the regular writing course. These results reveal the positive effect of the self-regulated strategies-based instruction on improving students' writing performance in EFL contexts. As mentioned earlier, the intervention programme was framed within self-regulated strategy development (SRSD) model, which has been proven to promote self-regulated learners and increase their academic outcomes in L1 settings (Graham & Perin, 2007, for a review). The significant differences between the two groups at the post-test and the delayed post-test lend support to the transferability

of the sustained effects of strategies-based writing instruction from L1 to L2 contexts. In addition, the magnitude of the difference between the two groups became small at the delayed post-test, suggesting that the effect of the four-month intervention waned after the treatment. This reveals a necessity to incorporate the strategy instruction into regular courses on a long-term basis to sustain the positive influence (Graham & Macaro, 2007; Manchón et al., 2007).

Furthermore, the pre-test writing scores as a covariate accounted for a large portion of the variance between the two groups at the post and the delayed post-tests. Results suggest that students' linguistic proficiency was a critical factor influencing their writing performance regardless of what strategies-based intervention they had received. This finding resonated with Zhang et al.'s (2008) argument for taking students' existing linguistic knowledge and competence into serious consideration prior to the implementation of a strategy instruction programme. On the whole, the positive results in this study lend support to the effectiveness of strategy instruction in improving EFL outcomes as it did in L1 settings (Graham & Harris, 2014; see Graham & Perin, 2007, for a meta-analytical review).

8.6.2 Changes of SRL strategies

Students from the experimental group reported significant improvements in using five SRL strategies: text processing, idea planning, goal-oriented monitoring, peer learning and interest enhancement between the pre- and post-tests whereas there was no significant difference over time for the control group. This suggests that after the intervention, the students from the experimental group had a better understanding of these SRL strategies and tended to deploy them more frequently. There were no significant differences in the use of other SRL strategies (non-targeted strategies) for either group at the post-test, adding some support to the effectiveness of the intervention rather than a random effect (Bai et al., 2014).

8.6.2.1 Cognitive strategies

Although text processing was the focused strategy during the intervention, no significant difference was found in reported use of both cognitive strategies between the

two groups at the post-test. One possible reason may be that the linguistic knowledge instruction was the focus of the regular teaching practices as well as the self-regulated strategies-based writing intervention. This assumption is supported by previous research which found that English writing courses in China normally focus on the instruction of linguistic knowledge, which mainly includes lexical and syntactic levels (e.g., J. Wang, 2014).

Results also revealed that only the experimental group reported a significant increase in using text processing strategies between the pre-test and the post-test. This indicates that the students from the experimental group were more likely to take heed of linguistic regulation such as grammar, lexis or syntax during and after the writing intervention. This suggests that the instruction of text processing strategies produced a positive effect on students' use of, or attitude towards, the importance of text producing processes. This study, therefore, proposes that if the length of the intervention could be sustained longer, a significant effect on the improvement of using text processing strategies might be ensured between the two groups at the post-test (Manchón et al., 2007).

8.6.2.2 Metacognitive strategies

Metacognitive strategies include two types of focused strategies: goal-oriented monitoring and idea planning. The experimental group performed better in using the two targeted metacognitive strategies than the control group after the intervention. This means that the experimental group students reported using more metacognitive strategies to regulate and monitor their learning process or to generate more ideas before writing than the control group. For example, after the four-month instruction, students from the experimental group tended to monitor their mastery of writing knowledge taught in the intervention; set up goals for directing their learning activities and then evaluate their progress based on the task goals; and read related articles or search information online to generate more ideas for writing.

The apparent positive impact of the intervention on the orchestration of the metacognitive strategies suggests that the self-regulation instruction model, in its form as recursive procedures, may arouse students' awareness, enhancing their understanding

and encouraging the usage of the focused metacognitive strategies when they completed a writing task as Harris et al. (2008) have reported with L1 students. This study provides preliminary evidence for the effectiveness of self-regulation instruction on cultivating Chinese students' use of metacognitive strategies and self-awareness of regulating their own learning processes.

8.6.2.3 Social behavioural strategies

Social behavioural strategies include peer learning and feedback handling. Peer learning as a targeted strategy during the intervention was designed to focus on peer interaction in classroom environments, such as collaborating with peers to complete a writing task. The experimental group students reported greater improvement in using peer learning strategies than the control group at the post-test. This suggests that the intervention helped these students develop a better understanding of the orchestration and usefulness of peer learning strategies. According to Zimmerman and Schunk (2011), peer interaction contributes to constructing a cooperative learning environment, which helps students relieve the cognitive and psychological burden. Therefore, the inclusion of peer learning strategies as a type of targeted strategy may make students become more motivated and confident in learning to write. This assumption was corroborated by the significant increase in motivational beliefs and self-efficacy in the experimental group as discussed in later sections (see 8.6.3 and 8.6.4). These results also provide some support for the salient role of sociocultural factors in fostering SRL, which is regarded as a culturally rooted, socially mediated process “wherein students learn to internalize language, signs and activities existing first in the sociocultural practices of their communities” (Winne & Hadwin, 2010, p. 506).

8.6.2.4 Motivational regulation strategies

Motivational regulation as an essential component of SRL includes three sub-strategies: interest enhancement, motivational self-talk and emotional control. After the intervention, the students from the experimental group reported increases in their using interest enhancement and emotional control strategies at the post-test whereas the control group did not. This indicates that students from the experimental group became more strategic in increasing their learning interest or controlling their negative emotions

when completing a writing task after the four-month intervention. In addition, these students also reported greater use of interest enhancement strategies than the control group students at the post-test. This indicates that the instruction in the use of SRL strategies relating to cognition, metacognition and social behaviour may help students to increase their intrinsic interest to learn. These positive results might be accounted for by the cooperative and student-centred teaching practices or the positive influence of other targeted SRL strategies such as metacognitive strategies during the intervention, which helped students' become proactive in their learning process and more engaged in using strategies to control their motivation to achieve their learning goals or complete a task as reported by Teng and Zhang (2015).

8.6.3 Changes of motivational beliefs

The experimental group reported higher task value than the control group at the post test. The result suggests that students placed more value in the course material or teaching content in terms of "interest, importance and utility" (Pintrich et al., 1991, p. 11). One plausible reason might be that the self-regulation instructional model encouraged students to acquire new content knowledge and the targeted SRL strategies with sufficient teacher scaffolding and peer collaboration. This might enhance students' engagement in and perceived value of writing tasks.

Students in the experimental group also had more extrinsic goal orientation at the post-test, suggesting that they tended to use performance-related goals to motivate themselves in the learning-to-write process. This might be due to the instruction of goal-oriented monitoring strategies during the intervention, in which the students were provided with opportunities to set up task-related goals, thus the fulfilment of these learning goals increasing their extrinsic goal motivation.

However, the experimental group did not indicate a significant difference from the control groups in terms of other motivational beliefs (e.g., intrinsic goal orientation and control of learning beliefs). This may be because psychological factors, although being dynamic, often take a longer time to evolve as argued by Dörnyei and Ushioda (2013). The four-month intervention may not have been of sufficient length to change learners' intrinsic motivational beliefs.

8.6.4 Changes of self-efficacy

Students in the experimental group had significant gains in linguistic self-efficacy and performance self-efficacy at the post-test. This means that after the intervention, the students in the experimental group became more confident in using linguistic knowledge and accomplishing various writing tasks.

However, the group comparison only revealed that the experimental group outperformed the control group in performance self-efficacy at the post-test. This indicates that the intervention helped students increase their confidence in completing a writing task or mastering writing knowledge taught in the course. From a sociocultural perspective, one plausible reason might be that the mediation and scaffolding during the writing instruction may have increased students' self-confidence in their task performance. Previous research has argued that scaffolding can ease students' cognitive load and make learning tasks more manageable (Lantolf & Poehner, 2008; Lei, 2008).

No significant differences were found in terms of linguistic self-efficacy and self-regulatory self-efficacy between two groups at the post-test. The non-significant difference in linguistic self-efficacy might be because linguistic instruction was the focus of both groups. Furthermore, self-regulatory efficacy in this study was not a comprehensive construct which includes multiple dimensions of the self-regulating process but one that emphasised people's judgment of their capabilities to set up, monitor and evaluate goal-directed activities. This form of regulation needs a level of metacognitive control, which often requires a longer time to develop (Harris et al., 2010; Zhang & Zhang, 2013; White, 1999) than was available in this intervention.

8.7 Summary

The quantitative data together lend empirical evidence to the effectiveness of self-regulated strategies-based writing instruction in EFL contexts. As hypothesised, the four-month intervention made a contribution to promoting writing performance and increasing the students' willingness to use a wide range of SRL strategies to help them learn to write. After the four-month intervention, students from the experimental group had improved their writing test scores at the post-test and the delayed post-test,

suggesting the increase of their writing performance. They also became more active in deploying different strategies to generate more ideas before writing. They tended to think about the core elements of a good composition and monitor and evaluate mastery of knowledge directed by specific learning goals. They also tended to use some SRL strategies to increase peer mediation and explore different ways to engage more enthusiastically in a writing task.

The explicit strategies-based instruction with social scaffolding and mediation in a collaborative instructional model appears to improve students' motivational beliefs and self-efficacy. Informed by self-regulation theory, the strategies-based writing instruction helped students see greater value in writing tasks and become extrinsically motivated. These students also had more confidence in their linguistic competence and course performance through the scaffolding in recursive instructional stages. As noted in previous research (Graham & Harris, 2009; Schunk & Ertmer, 2000), the supportive instructional environments apparently enhanced the enjoyment students experienced during task engagement and increased their confidence gained from the successful usage of SRL strategies and collaborative supports.

Also evident is the fact that the pre-existing levels of all research variables (SRL strategies, writing test scores, motivational beliefs and self-efficacy) as covariates had significant effects on students' post-test performance. Although optimistic results of the effectiveness of strategy instruction have been obtained, the magnitude of the effects of covariates reveals the necessity to build up learners' linguistic knowledge and self-regulated competence to maximise their literacy development. In addition, practical EFL teachers are encouraged to have a clear understanding of their students' pre-existing knowledge of SRL strategies and writing proficiency prior to the strategy instruction.

Taken together, the quantitative findings are consistent with prior research which found a significant effect for explicit strategies-based writing instruction on fostering students' use of strategies and their writing performance (see Graham & Perin, 2007; Plonsky, 2011, for a review). This study also provides more information about how self-regulated strategy instruction may impact EFL writers' psychological conditions such

as their perceived motivational beliefs and self-efficacy. It is clear that self-regulated strategies-based writing instruction helped EFL learners become active in the learning process, deploying a range of SRL strategies to solve learning problems and changing students to become more motivated and confident in completing a writing task, thereby improving their academic outcomes. The findings provide some empirical support to Hsiao and Oxford's (2003) claim that strategies can "pave the way toward greater proficiency, learner autonomy, and self-regulation" (p. 372).

CHAPTER NINE

RESULTS OF CASE STUDY

This chapter reports findings of a case study via students' interviews, writing journals and classroom observations. Data were collected from two students from the experimental group: one high-proficiency writer and one low-proficiency writer. Qualitative results are expected to triangulate with the quantitative data and lend a lens to extricate the complexity of SRL development during the four-month writing instruction. Findings are presented case by case to provide a descriptive and analytical response to the research questions in Phase Two.

9.1 Lei's Story: A Low-Proficiency Writer

9.1.1 Views prior to the intervention

9.1.1.1 *Motivational beliefs, self-efficacy and attitude towards writing courses*

Lei was a second-year student who was voluntarily recruited from the experimental group. She was identified as a low-proficiency writer based on her writing test scores collected from the pre-test and the writing course which was taken in the last term.

“I think I am a low-proficiency English learner, particularly in writing. You know, I only got 89/150 in the English entrance examination for administration to university. However, I am studying English as my major now. It's so ridiculous. I have always been struggling with English writing because of insufficient linguistic knowledge, particularly in vocabulary and grammar.” (Lei, Interview 1)

It is apparent that Lei had a low linguistic self-efficacy due to her insufficient linguistic knowledge and she also felt less interested in English writing itself.

“I feel that I am sick of learning English since I entered the university and have no interest in English writing. However, as an English-major student, I know that I have to find some ways to improve my English writing because it is important for my future career or gaining credits for graduation. In fact, I tried to practise English

writing at the very beginning of the university study but gradually lose my willingness to write because I was constrained by the limited linguistic knowledge, particularly in grammar and vocabulary.” (Lei, Journal)

Although Lei did not report any intrinsic motivation in writing itself, she mentioned using performance goal orientation such as learning for career or better performance in examination as a method to motivate herself. Lei also expressed her willingness to write but she felt frustrated due to her limited linguistic capability particularly in grammar and vocabulary.

Lei reported a mixed attitude toward the usefulness of the teaching content of some her writing courses, as she mentioned,

“due to my low English proficiency, I cannot completely comprehend what is taught in writing courses. But I find the teaching content of the writing course in the last term is quite helpful. It focused on rhetorical knowledge that could be directly used in my own composing process. However, paragraph writing knowledge taught in this term is not so useful because I don’t how to use them when given a writing task. In addition, we are not provided with enough opportunities to practise these writing skills and knowledge in the writing course.” (Lei, Journal)

It is clear that Lei’s learning motivation in the writing course was driven by her performance or mastery goal orientation. In other words, whether she could comprehend the teaching content (mastery goal) or how she could apply what she had learned in the writing course directly to a writing task (performance goal) determined her evaluation of the value of the usefulness of the writing course. She also pointed out that the most unsatisfying aspect of the writing course was having enough writing practices.

“I have had few chances to write in English since the last term. Normally the teacher just gave us some True/False questions which were so easy for us English-major students to answer.” (Lei, Interview 1).

When asked her opinion of the textbook used in the writing course, she responded that she didn't know it was the textbook for the writing course.

“Oh..., that is the *textbook*! I don't think it is quite useful. You know, the teacher just read the content of that book without any interaction with us or explanation of the knowledge in the book. Most of time, she reads the textbook in a monotonous tone without any interaction with us. I think the textbook should provide more explanation about the terminology rather than just list some writing samples. In addition, it would be better if there were some drills after each chapter.” (Lei, Interview 1)

It is clear that Lei did not feel satisfied with the writing course in terms of the teacher-centred instruction, writing exercises and writing material. Her low interest and motivation contributed to her view that courses were “monotonous teaching practices” without sufficient practices and chances of interactive activities during classroom teaching. Therefore, she reported that the writing tasks and the teaching material were of a little value.

With such a low motivation for writing, Lei did not fully engage in the writing course. The classroom observation recorded that she sometimes did not complete writing tasks on time or even skipped the class. She rarely actively answered the teachers' questions unless she was asked directly, which may reflect her low performance self-efficacy. Lei also mentioned her low level of control of learning beliefs. As she reflected in her journal,

“I never push myself to write. Most of time, I leave the writing task there if I don't want to write. I know if I try hard, it is still in vain. It's not easy to improve writing proficiency by myself.” (Lei, Journal)

When it appeared she could not follow what was taught in the writing course, Lei was observed to engage in some off-task activities such as playing games or WeChat on her mobile phone, revealing her lower engagement in the writing course due to the challenges caused by low linguistic language competence.

9.1.1.2 Understanding of what makes a good writer and the utility of SRL strategies

When asked what makes a good writer, Lei mentioned that ideas and structure were essential aspects affecting the quality of a composition. She explained:

“I think a good writer has advanced linguistic proficiency with a large capacity of vocabulary. They really know what they want to write and plan it very well. For instance, in my writing process, I try using some complex sentences and choosing advanced words to express my ideas. But in practice, it is hard to achieve so I just simple write anything I can come up with.” (Lei, Interview 1)

It is clear that, for Lei, ideas and syntax were critical factors affecting the quality of a written text. Therefore, Lei put all her efforts into linguistic knowledge in the writing process.

In terms of writing strategies, Lei did not have any idea of what ‘writing strategies’ referred to and confused it with a writing template given by the teacher. After the interviewer’s explanation, Lei reported that she had used some writing strategies in the learning-to-write process but did not realise that these skills belonged to part of writing strategies due to the lack of teacher’s explicit instruction. As she explained,

“the writing teacher mentioned some writing skills such as revision and planning but she did not say that these ‘writing skills’ belonged to ‘writing strategies’. Most of time, the teacher just simply referred to these skills rather than demonstrated how to use them in detail or in different writing tasks.” (Lei, Interview 1)

When Lei described her writing habit, she mentioned using some strategies in pre and after writing processes.

“Before writing, I sometimes think about what complex sentences and connections I can use to express my idea. After writing, I may look through the whole composition to check spelling, connection and the use of tense....then the clarity of expression but it depends on whether I can revise it or not.” (Lei, Interview 1)

Lei's description of her writing process showed that she demonstrated a certain degree of knowledge in using some learning strategies, such as planning and revising at a basic level. In addition, her use of these strategies appeared to be influenced by her linguistic proficiency. When asked to provide more explanation about how she deployed these writing strategies, she could only report a basic understanding, but could not provide a thorough elaboration when she completed a writing task.

“I think revising strategy is to check what you have written. In terms of planning, I think it is about planning what you want to write in different paragraphs. What you can write in the first paragraph, in the second...and then conclusion. That's it.” (Lei, Interview 1)

Lei as a low proficiency writer selectively used some social strategies such as seeking help from teachers and taking their feedback seriously. She reported a low willingness to see help from peers or shared her composition with them for feedback. She explained that “we need to take our own responsibilities in learning processes” (Lei, Journal).

However, Lei had more trust in teachers' professional knowledge and expressed her willingness to have their guidance and scaffolding to improve her English writing competence.

“I feel like that it is necessary to have an English teacher's instruction. Without teacher's professional guidance, I think students' improvement would be very limited. So I take teacher's feedback on my writing seriously.” (Lei, Interview 1)

Lei also only reported using some interesting topics as a way to motivate herself to practise English writing in her spare time.

“I have tried to practise English writing by choosing some interesting topics since I entered the university. Without much motivation, I did not persist in it any longer. Now, I feel reluctant to complete any writing task given in the course. I found many excuses for myself not to submit writing assignments to the writing teacher. To be honest, I have successfully escaped many times. Haha...” (Lei, Journal 1)

The above quotation explicitly reveals Lei's negative emotion toward writing tasks without any willingness to sustain her learning efforts, even enjoying such "escaping" processes. Lei appeared to have a low level of using emotional control strategies and did not exert much effort in learning to write in English.

Lei's limited usage and understanding of writing strategies might be attributed to the product-focused and test-driven writing courses with less emphasis on the strategies-based instruction, as she reported:

"I don't know how useful these writing strategies are during my writing process. I would pay much attention to them if [the teacher] had mentioned the importance of these writing strategies and demonstrated how to use them in the writing course. Normally the teacher just gives us some writing samples chosen from the Test for English Major (TEM) Band 4 past papers and asks us to familiarise the structure of a good essay or recommends us to remember some advanced sentence structures for our own writing. She never mentioned what strategies we could use in the real learning-to-write process when problems arose." (Lei, Interview 1)

Another reason for Lei's reluctance to use of some writing strategies might be her less confidence in using some writing strategies due to her low linguistic proficiency.

"When I try to revise a writing draft, I feel incapable to fix some grammatical problems, such as inaccurate or repetitive use of some words and complex sentences with grammar errors. Sometimes, I am not sure about whether the sentence I wrote is correct or not." (Lei, Interview 1)

9.1.2 Views after the intervention

9.1.2.1 Motivational beliefs, self-efficacy and attitude towards the writing intervention

Four months later, Lei as a participant of the experimental group reported salient changes in terms of writing motivation, self-efficacy and attitude toward the writing instruction. In the post interview, Lei appeared to be more positive about writing. She seemed to have more confidence in task performance and had greater intrinsic goal orientation in English writing.

“I don’t feel so challenged or timid when I complete a writing task. Sometimes I have more willingness to practise English writing in my spare time for improving my writing competence and having a good score in a writing test. For example, I would like to write something in order to use what has been taught in the writing course, such as the graphic organiser for planning.” (Lei, Interview 2)

It is apparent that after the writing intervention Lei became more confident in English writing, increasing her situational interest in practising writing via using some strategies taught in the writing course. Such a positive change suggests that the strategy-focused instruction helped Lei realise the importance and usefulness of the teaching content and the value of the writing course for her. Therefore, she felt more motivated and engaged in classroom activities.

“I never thought peer discussing was such a good way to help me develop more ideas for writing. Sometimes I am inspired by other students’ feedback when I get stuck in a writing topic. In order to perform better than others in a group discussion, I may search more information online or try to be attentive to the metacognitive prompts given by the teacher for any clue to write. I feel motivated when I propose a new idea or give feedback to other students which they value most.” (Lei, Interview 2)

This indicates that the interactive instructional process with a focus on cultivating peer learning strategies not only helped to relieve Lei’s cognitive burden in generating ideas but also motivated her to get more involved in classroom activities. In addition, this form of social behaviour strategies cultivated Lei’s performance goal orientation (e.g., perform better than others), which functioned as an impetus for increasing her writing motivation.

With increased motivation, Lei appeared to have more confidence in her classroom performance as well her linguistic competence.

“In the beginning, I did not think I could write a good composition due to my low linguistic proficiency. However, the teacher presented a clear instruction [self-regulation model] on how to write a certain genre with some specific strategies so

that I can understand what a good composition is like and apply what [the teacher] taught independently. I felt more encouraged by my improvement.” (Lei, Journal)

It appears that Lei felt that this self-regulation model provided her a clear instruction on how to use specific strategies to solve different genre-related/task-related writing problems. Lei further explained:

“the teacher used think-aloud, yes that’s what she said to elaborate what writing strategies can be used when completing a writing task, why and how to use them in an effective way. The instructional process is recycling so that I can comprehend thoroughly, which has never happened before in the previous writing course.” (Lei, Interview 2)

This means the self-regulation model with the recursive process presented a clear instructional procedure, which helped Lei develop a better understanding of the learning content and encouraged her to use, independently, what had been taught.

9.1.2.2 Understanding of what makes a good writer and the utility of SRL strategies

After the intervention, Lei seemed have developed a thorough understanding of SRL strategies, changing her understanding of what makes a good writer.

“A good writer is a person who can use different ways to solve writing problems and make full use of resources around him or her, such as seeking information online or talking with peers for generating more ideas for writing.” (Lei, Interview 2)

It seems that Lei changed her view that a good writer was an advanced English proficiency learner to a writer who was an independent and flexible strategy user. Her explanations indicated that she was able to talk about writing strategies more extensively and understood how to deploy them in their learning process more flexibly.

As she further explained:

“I think the use of some writing strategies is critical to help us writing well. For example, if students want to have more ideas for a writing topic, they may use online searching or brainstorming with other peers for generating some useful information for later writing. They can also use some specific ‘sub-strategies’ such as setting task goals or using smart note to organise writing ideas. Or if they want to evaluate whether their idea is logical or not, they can use the graphic organiser as a way to check the coherence as my writing teacher used in the class. After writing, a good writer normally can revise the text based on the need of the prompt and address the questions...” (Lei, Interview 2)

The above excerpt shows that after the intervention, Lei appeared to have a clearer understanding of these writing strategies and knew how to apply them in their learning-to-write process (e.g., idea generating, peer learning and evaluating. As she reflected in the journal:

“the teacher demonstrated how to use different specific task strategies to help us to write. They are quite useful. For example, when writing a topic on *Plastic Surgery*, I talked with my friends first and jotted down any interesting ideas on a piece of paper. Then I use the graphic organiser to organise these scattered ideas and the TREE (topic, reason, evidence and ending) strategies to facilitate my argumentation the form of argument part.” (Lei, Journal)

It is apparent that Lei has developed an extensive knowledge of task specific sub-strategies for completing different learning goals.

In addition, Lei mentioned that good writing involved “revising the text based on the need of the prompt and address the questions”, which was not referred to in her pre-interview. Lei’s explanation of a good writer clearly suggests she developed a thorough understanding of the writing process and how she could apply a range of SRL strategies more flexibly to facilitate her writing and achieve different learning goals.

After the intervention, Lei gave positive feedback on the instruction of the self-regulation process with a focus on goal setting, evaluation and monitoring. She explained:

“the integration of monitoring and evaluation is a good way for me to reflect what I have learned and which part I master well or which part I need to further focus later so that I can actively adjust my learning strategies and enjoy the sense of achievement once I achieved some of my learning goals.” (Lei, Journal)

This suggests Lei was becoming an active learner who took the initiative to regulate her learning, whereas previously she appeared a passive writer or writing task “escaper” with low confidence and little interest in English writing.

Lei reported that she found peers’ collaboration or teachers’ scaffolding helped her relieve the psychological and cognitive burden, which promoted her motivation and self-efficacy. She argued:

“I feel more confident when I collaborate with other peers to complete a writing task in classroom environments. For example, when I don’t have any clue of a writing topic, peer discussion will inspire me a lot with many new ideas. If I don’t know how to revise my writing draft or feel unclear of how to improve it, I may turn to my peers for their feedback. To be honest, I have never used these strategies before. However, during the course, the writing teacher instructed and demonstrated how to use them, how to give constructive feedback to others and how to engage in effective peer discussion. I found that I became motivated and clear of whom I can ask help from.” (Lei, Interview 2)

The social mediation within the collaborative activities in forms of teacher’s modelling, scaffolding and peer learning appeared to contribute to Lei’s psychological development (e.g., confident and motivation), the production of a writing text and the classroom performance. It seems that Lei became strategic in her learning-to-write process, which brought her better academic outcomes as evidenced in the improvement of writing test scores at the post and delayed post-tests.

When she was asked what contributed to her improvement of writing test performance, Lei argued:

“I feel that I become more confident in my English writing competence and such confidence positively influenced my performance in the writing test. During the writing course, I had more opportunities to practise English writing and revise the written draft several times rather than left it there as I did prior to the treatment. I also tried to apply what the teacher had taught during the writing course such as how to generate more ideas for a writing topic, how to better organise my ideas to a logical essay and how to check it after writing.” (Lei, Journal)

This excerpt suggests that the instructional process helped Lei develop more confidence in her linguistic and performance self-efficacy. In addition, Lei reported more willingness to use some SRL strategies to solve writing problems and exerted more effort in learning to write with active control of her learning process. All these appeared to work together contributing to Lei’s better performance in writing tests.

9.2 Bin’s Story: A High-Proficiency Writer

9.2.1 Views Prior to the intervention

9.2.1.1 Motivational beliefs, self-efficacy and attitude towards writing courses

Bin was an advanced-proficiency writer with high English scores both in the entrance examination and the pre-writing test. She reported some intrinsic interest in English writing and had actively taken part in some English writing competitions prior to the tertiary study.

“I sometimes have a willingness to practise writing something in English, such as TEM Band 4 writing topics as a way to improve or evaluate my knowledge and writing competence. I think it is helpful for me to have a good score in a real writing test. Normally, it is once a month and then I collect my writings in a notebook for later reviewing. For instance, when I am required to complete a writing assignment, I will go over my writing notebook for some ideas or useful expressions. In my spare time, I also like reading English articles or essays, which inspires my willingness to write.” (Bin, Interview 1)

It is evident that Bin had developed a certain level of mastery goal motivation in English writing for improving her writing competence and could use some ways to sustain or increase her writing motivation, such as extensive reading or resourcing when completing a writing task. The above excerpt further reveals that Bin's writing motive was also driven by an extrinsic goal orientation, such as performing well in English tests.

Asked about her view of the regular writing course, Bin pointed out that she learned some professional writing knowledge but did not feel motivated.

“What I value most in the writing course is that I can learn some complex sentence structures and useful writing knowledge such as what a good structure of an argumentation essay is like, which I may directly follow the sample structure in my own writing. However, I don't feel motivated in the writing course because the teaching content in the writing course is confined to the textbook with a tedious instructional process and less involvement of students.” (Bin, Interview 1)

The above excerpt shows that Bin gave priority to the usefulness of teaching contents with a focus on linguistic instruction and writing knowledge. In addition, she had developed a basic understanding of genre knowledge and was aware that she should use what she learned when completing a writing task. However she directly expressed her dissatisfaction with the teaching content and few opportunities for students to engage in the writing.

Bin had developed a certain level of cognitive maturity in learning to write so that she could understand the usefulness of writing knowledge instructed in the writing course and actively practise English writing driven by learning interest and goal-orientated motivation. However, Bin still complained about her low confidence in composing processes.

“I sometime find it difficult to produce appropriate language to express my idea like a native speaker. To be honest, I am not confident in the accuracy of my expressions particularly when I want to express a complex concept in my free writing.” (Bin, Journal).

It seems that for Bin, an advanced writer, linguistic self-efficacy was also a critical factor influencing her production of a good composition. That is to say even though Bin had developed a degree of genre concept (argumentation essay), used some learning strategies and had cultivated a certain level of intrinsic motivation in writing, she still felt incapable of producing specific language discourses to express her ideas in English writing.

9.2.1.2 Understanding of what makes a good writer and the utility of SRL strategies

Bin regarded “writing skills” as the most important aspect influencing the production of a good composition.

“What matters most for a good writer is the high level of writing skills... [which refer to] the use of some unfamiliar and advanced vocabulary and complex sentence structures. Of course, daily writing practices and the amount of English reading also affect whether a learner can write well or not.” (Bin, Interview 1).

Bin appeared to regard the linguistic aspect (i.e., syntax and diction) as the most critical factor influencing whether a learner can write a good quality written text. However, she also mentioned the use of some strategies to increase writing performance, such as writing practices and extensive reading, as she did in her spare time. Bin’s responses suggest that she had developed a level of independent learning capability by reporting using some surface learning strategies, which was not reported in Lei’s case.

Bin had heard of ‘writing strategies’ mentioned by the English teacher in the writing course, but she did not exactly understand what ‘writing strategies’ referred to in writing. After the interviewer’s explanation, Bin recalled that she learned some writing strategies in the previous writing course.

“The writing teacher taught us how to generate more ideas based on different writing topics, how to express ideas or plan in a more native way rather than simply translating ideas from Chinese to English. The teacher also mentioned the importance of revising our written texts to avoid basic spelling and grammar errors. I find some writing strategies helpful, such as the ways to generate more ideas.

However, it sounded quite useful but I did not know how to apply in the real writing process.” (Bin, Interview 1).

Thanks to the teacher’s instruction, Bin had developed some knowledge of writing strategies such as idea planning and revising, which triggered her willingness to use these strategies in her own writing practices. However, she also expressed dissatisfaction with the teacher’s limited instruction on how to use these strategies in realty. As she added,

“the teacher only mentioned these skills briefly without much demonstration and explanation. Most of time, she briefly introduced some new methods but not every student, particular some students with low English proficiency, could completely understand them and knew how to use them in their own writing.” (Bin, Interview 1)

Besides the limited instruction on writing strategies, Bin also pointed out that the writing teacher did not take individuals’ learning differences, such as their language proficiency, into consideration during classroom teaching.

Having learned some knowledge about writing strategies, Bin reported using some writing strategies actively to improve her writing competence or achieve some learning goals.

“In order to help me write well, I would like to compare what I wrote with some good samples from the textbook or online. Through the comparison, I felt I made great improvement. I try to remember some good samples because I think I will make much more progress.” (Bin, Interview 1)

It was apparent that Bin was an active writer who tried to deploy resourcing strategies to help her write, and valued the usefulness of memory strategies in learning to write. Bin also reported using some metacognitive strategies such as goal setting to increase her writing achievement.

“In my daily learning, I sometimes practise English writing according to different goals such as preparing for a writing test.” (Bin, Interview)

It seems that the external goal orientation (test-related orientation) motivated Bin. Therefore she set up some short-term goals to improve her performance in writing tests. Additionally, the successful deployment of goal-setting strategies increased Bin's intrinsic motivation and situational interest.

“I feel motivated in the process of making a short-term plan or goal and then trying to realise it. To be honest, the successful fulfilment of the specific goal gives me a sense of achievement. I really enjoy that feeling.” (Bin, Journal)

Realisation of specific goals appears to help Bin develop a strong sense of achievement, triggering her willingness to sustain her learning efforts and cultivating a greater passion for English writing.

In describing her composing process, Bin demonstrated cognitive maturity in using writing knowledge and strategies compared with Lei who appeared to feel lost and less confident.

“When planning, I pay attention to my ideas, the use of tense and how to make the essay more coherent and cohesive. I would like to think about some relevant news or events to evidence my topic. I prefer planning by myself rather than discussing with others or searching resources from textbooks or online resources. I will not worry much about the structure because I often use the sample essay structure, which is composed of proposing a topic in the first paragraph, extending the discussion in the body and then summing up in the conclusion. The teacher gives us a lot of writing samples written in that structure.” (Bin, Interview 1)

This excerpt shows that Bin had a clear understanding of how to write an essay with a focus on idea generation, resourcing and organisation. As an independent writer, she felt confident in her ability to write so she preferred not to seek social support from others when planning.

After writing, Bin described that she often revised her written essay with a focus on the linguistic aspect.

“After writing, I normally check the overall meaning of the essay, some obvious grammar errors and mechanic problems such as punctuation and spelling. However, I still feel that I am incapable of fixing up some complex grammatical errors and logical problems due to the limited competence in linguistic knowledge.” (Bin, Interview 1)

Having acknowledged her constraints in the revising process, Bin reported using some social strategies such as asking for peers’ feedback on her written text or seeking teacher’s suggestion for improving the quality of her writing draft.

“I would like to share my composition with classmates for grammatical and spelling checking or ask English teacher’s feedback on my writing. I think students’ feedback is useful in terms of checking the consistency of grammar and spelling errors so I normally take their suggestions as reference. Teacher’s feedback is specific and professional, which helps me exactly know my weakness and how to work on it. Therefore, I take all their feedback seriously and try to work out some ways to improve based on their suggestions.” (Bin, Journal)

Bin reported seeking help, strategically, from others and took different attitude toward teachers and peers’ feedback to her writing. For her, teachers had authority because of their professional knowledge in writing.

Bin briefly mentioned motivational self-talk as a way to sustain her learning efforts and get higher grades.

“If I feel bored during the process, I will force myself to persist in it by telling myself that I am an English major student or writing is critical for me to have a good score in TEM Band 4.” (Bin, Interview 1)

It seems that extrinsic goal orientation was her major motivation to sustain her learning effort and persistence in the learning-to-write process.

9.2.2 Views after the interventions

9.2.2.1 Motivational beliefs, self-efficacy and attitude toward the writing intervention

Having attended the four-month self-regulated strategy intervention, Bin reported a clear increase in her interest and motivation in English writing. She also felt more confident in her ability to write a good composition and mentioned how the extrinsic goal-oriented motivation positively augmented her learning efforts with active engagement.

“I feel more confident in my linguistic proficiency and writing competence to complete different writing tasks when compared with other students in my class. Most of time I can master what the teacher taught quickly and apply to other writing tasks assigned by the teacher. I will have a strong sense of achievement if I can propose some interesting ideas or outperform other peers when we work together to complete a given task in the classroom.” (Bin, Journal).

It seems that strategies-based instruction in an interactive classroom environment built Bin’s confidence in her classroom performance and the use of linguistic knowledge. In addition, she appeared to gain a sense of achievement during the interactive classroom activities (e.g., peer collaboration), triggering her eagerness to perform better than others. This change suggests an increase of her extrinsic goal orientation in learning to write.

Bin gave overall positive feedback on the self-regulation model in light of the interactive classroom environment, instructional procedures and the necessary scaffolding from the teacher. She explained:

“the instructional process followed a recursive model so that I knew what I was expected to do in the next stage. If anyone felt frustrated or challenged, the instructor would be there and provide specific help and suggestions. The interactive classroom environment with clear instructional procedures made me feel like that I was not alone in the learning process. In particular, the topic used for writing was very interesting such as *Plastic surgery*...rather than some boring topics selected from TEM past papers used in the previous writing course.” (Bin, Interview 2)

Bin pointed out the significant role of modelling and scaffolding in strategies-based writing instruction helped her set up a clear task goal and established a cooperative

learning environment. Also notable is that Bin appeared to have developed more situational interest because of the change of writing topics and the form of instructional procedures. She mentioned:

“what interested me most was that the teacher demonstrated her mind-thinking [think-aloud] of what and why she wanted to use different strategies and how to use them in different writing tasks. This modeling procedure inspired me a lot to self-reflect my own writing process such as how and when I could use this strategy to help me in learning to write.” (Bin, Interview 2)

Apparently the teacher’s modelling of how to use the targeted strategies heightened Bin’s metacognitive awareness to evaluate her mastery of knowledge and monitor her own learning. Bin reported that the writing instruction motivated her to increase the frequency of practicing English writing based on different genres.

“The writing course triggered my willingness to write something interesting rather than only for passing a test. As suggested by the writing teacher, I tried to apply what she taught about writing strategies to other writing styles [genres], such as novel. I need to say it is quite an interesting practice to use specific goal setting and idea planning strategies to write a fiction. I never thought I could use goal strategies in such a flexible way and really enjoyed the process. Now I have a strong passion for English writing because I can best demonstrate my linguistic strength and creative ideas compared with other peers.” (Bin, Interview 2)

Evidently, the strategies-based writing instruction increased Bin’s willingness to apply what had been taught on writing strategies to other genres. This strategy generalisation suggests that Bin valued what she had learned about writing strategies during the intervention. As a result she put more effort into the mastery of knowledge and extending the usage of the targeted strategies (e.g., goal setting) into other situations. In addition, such positive effects aroused Bin’s situational interest, motivational beliefs (e.g., task value, control of learning and intrinsic goal orientation) and self-confidence in classroom performance.

9.2.2.2 Understanding of what makes a good writer and the utility of SRL strategies

Besides the change of psychological states and attitude toward the writing instruction, Bin's responses suggest that she had developed a thorough understanding of the writing process and reported an extensive usage of different SRL strategies in learning to write. In the post interview, Bin changed the term 'writing skills' into 'writing strategies' when she was asked to explain what influenced the production of a good composition. Her expressed understanding of writing strategies now included multiple dimensions from linguistic perspective to social aspects. As she posited,

“I still think linguistic aspect is the critical part influencing the quality of a composition. However, it is more than that. The composing process not only requires the use of linguistic knowledge but also the regulation of many other aspects such as planning based on graphic organiser and self-revising based on evaluation checklist. The active use of these writing strategies contributes to producing a good composition. Well, sometimes collaborating with peers also works well to help us write a good essay”. (Bin, Interview 2)

Bin has apparently extended her understanding of what affects the performance of a good writer. She noted that this not only included the linguistic aspect but also the extensive use of some strategies with different subcategories, such as planning with a graphic organiser, revising with a checklist and peer learning in the production of a written text. This change reveals that Bin has developed a comprehensive understanding of the nature of the writing process, which entails linguistic, cognitive and social dimensions. However, it needs to be pointed out that, for Bin, linguistic proficiency was still the most critical aspect influencing the quality and the production of a good written text.

Bin also reported deploying some strategies in a more elaborative and flexible way, suggesting that she was developing capability in apply some SRL strategies.

“One strategy which benefited me most was the goal-oriented monitoring. I have already known how to use goal setting strategies but, most of time, I felt that I could not evaluate and adjust my task goals effectively. During the writing course,

the teacher gave us an evaluation checklist and required us to generate our own list based on different goals. Then she asked us to use the checklist by the end of each course to evaluate our mastery of knowledge in the writing course and the performance of ourselves. That helped me a lot in evaluating the fulfilment of my goals in different situations and aroused my awareness to actively control my learning.” (Bin, Interview 2)

It seems that the well-designed writing instruction with a focus on metacognition impacted positively on Bin’s mastery and usage of targeted writing strategies and their active control of learning. This means the integration of self-regulation into the strategy instruction effectively cultivated learners’ awareness to monitor and evaluate their learning process and performance, which might bring more positive outcomes.

Bin also reported that she had developed a rich repertoire of SRL strategies which were useful in different specific writing tasks.

“The teacher mentioned some other writing strategies which I never heard of before. For example, for metacognitive strategies, the teacher modelled how to use the metacognitive prompt to generate more ideas or how to organise the structure of an argumentation based on the SCAN graphic organizer. Being motivated, I become more active and engaged in learning to write. For instance, I associate the writing topic with my own interest when I want to practise English writing rather than only writing for passing tests. When I am to complete a writing task or assignment, I will search information online or other writing material so that I can have more ideas to write or share with my peers.” (Bin, Interview 2)

Bin had apparently learned how to use other SRL strategies in different writing tasks, which motivated her to use a range of strategies in and out of classroom environments. Bin also mentioned using some motivational regulation strategies, such as interest enhancement strategies (e.g., associating writing topics with her own interest), even though the instructor did not focus on that type of strategy. As she explained:

“inspired by the strategy evaluation list given in the writing course, I made a similar list to motivate myself when I wanted to give up. For instance, I jotted

down a list of why I needed to practise English writing to encourage myself and read the list every time when I did not have any motivation to continue writing.” (Bin, Journal)

It is clear that Bin became more active in regulating her motivation, which was not mentioned in the pre interview. She mentioned using motivational self-talk and interest enhancement strategies to sustain her learning efforts when she had low interest or negative emotions. Bin attributed to the self-regulated strategy instruction, which had a positive influence on her active control of motivation, triggering her to use these strategies into other situations.

Another apparent change was in her attitude towards peer feedback, which was not valued so much in the pre interview.

“Prior to the treatment, I did not think my peers would provide some useful suggestions to help my writing particularly in the planning process. However, the teacher required us to collaborate during the course. Through this interactive way, I was quite impressed by some peers’ creative ideas and their critical and logical thinking competence although most of them did not perform well in writing tests. I am happy to take their suggestions or feedback seriously.” (Bin, Journal 2)

As discussed earlier, Bin was an independent writer, particularly when it came to planning processes. She was quite confident in her ability to come up with sufficient ideas to write. However, the interactive classroom interaction provided opportunities for Bin to realise the usefulness of seeking helps from or collaboration with peers. This changed her understanding of the usefulness of some social strategies (e.g., peer learning) and promoted her willingness to share her writing with other students and take their suggestions seriously.

Furthermore Bin, as a high-proficiency writer had a clear increase in her post-writing test score. She attributed the writing improvement to her increased confidence and the positive effect of the strategy instruction. As she explained,

“I felt more confident in the post-test and delayed post- tests. As instructed by the teacher, I had a clear picture of what I was supposed to do once I got the writing topic in the test. For example, I first looked through the writing prompt and then outline my ideas based on the planning graphic organiser and used the evidence extension chart to help organise examples to support my argument. During the composing process, I used the task-specific evaluation list to check whether my evidence and discussion could exactly support my idea. I did not feel worried or upset if I could not come up with proper linguistic expressions or advanced vocabulary. When I completed the first draft, I initially evaluated the coherence or logic of the content with a focus on the topic sentence of each paragraph and the evidence. Then I checked the linguistic aspect, such as grammar and spelling.” (Bin, Interview 2)

This excerpt suggests that Bin had developed a mature understanding of the composing process. She could independently and actively deploy what she had learned in the writing course, particularly different SRL strategies with more confidence. She also reported an increased confidence in task performance and control of her learning, which contributed to her improvement in writing tests.

9.3 Summary

9.3.1 Motivational beliefs, self-efficacy and attitudes toward the writing course

Findings collected from the pre interviews show that both students’ motivation beliefs and self-efficacy were closely correlated with their linguistic proficiency level. For example, Lei, as a low-proficiency student had no interest in English writing (e.g., “sick of English learning”) and had less confidence in the use of linguistic knowledge or mastery of the course knowledge. She attributed such low psychological conditions to limited linguistic proficiency, particularly in grammar and vocabulary. Compared with Lei, Bin, as a high-proficiency student, reported more goal-oriented motivation with confidence in her linguistic competence (linguistic self-efficacy) and classroom performance (performance self-efficacy). With interest, she liked practising English writing on some topics chosen from TEM Band 4 past papers and expressed a stronger extrinsic goal orientation to have a better performance in classroom environments and

writing tests. The above findings corroborate the quantitative findings collected in Phase One (Chapter Seven), which found that writing proficiency was a critical factor influencing students' motivational beliefs and self-efficacy.

Findings also suggest that both students' writing motivation was influenced by their attitudes toward the writing course. As evidenced in the pre interview, both students complained of the teacher-centred teaching activities with less involvement of students and limited writing practice. For instance, Lei felt isolated and demotivated in the writing classroom because of the monotonous teaching instruction and no interaction between students and the teacher. She even mentioned her incapability of completely comprehending what the teacher taught in the writing course and less value of the teaching material and the use of textbook. This indicated her low level of task value and mastery of goal orientation in the writing class. With such negative psychological conditions, Lei had a series of off-task activities during the writing class, as discovered in the classroom observation. However, as an English major student, Lei also expressed her willingness to increase her learning effort and regarded self-achievement as a major source of motivation to learn writing. She failed in the mastery of writing knowledge and the self-improvement of writing competence due to her limited linguistic proficiency and isolated learning environments. This negative experience, in turn, appeared to lead to the increase of her self-doubt, negative expectations and low self-efficacy in task. Unlike Lei, Bin had a dual attitude toward the writing course. For one thing, she acknowledged the useful aspects of writing courses, which helped her build up the professional knowledge of some "writing skills". According to Bin, these skills mainly included some writing knowledge about the organisation and content of an essay along with some complex sentence structures. Bin also complained about the teaching content which was confined to the textbook and the tedious instructional process in which most students did not have much chance to get involved in classroom activities.

The two students' attitude toward the writing course also appeared to be influenced by their linguistic proficiency, suggesting that a student with high linguistic proficiency tends to have a more mature and a better understanding of the usefulness of writing knowledge taught in the writing course. In addition, findings show that the instructional process played an essential role in affecting both students' writing motivation and their

confidence in linguistic and course performance. The individual-focused model provided each student, particularly a low-proficiency one such as Lei, with sufficient time and opportunity to master the writing knowledge and achieve independent performance. Therefore, they may become more self-efficacious in English writing and motivated by their improvement, as in Lei's case. All these positive changes reflected the effectiveness of the self-regulation instructional model in terms of improving learner's motivation and self-efficacy, which in turn contributed to the active use of SRL strategies in learning to write. In addition, findings lend support to a strong argument for including individuals' differences in the design of the syllabus and the writing instruction for developing motivated and self-efficacious writers (Zhang, 2013; Manchón, 2009).

In the post interview, the two students reported changes in their writing motivation and self-efficacy along with their obvious improvements in writing test scores. After the intervention, both of them expressed their willingness to practise English writing and become more self-efficacious in applying what they had learned in the writing course. In Lei's case, she became more proactive and engaged, expressing satisfaction about her progress during the treatment. The same positive development also occurred in Bin's case who not only maintained her intrinsic interest but also developed greater extrinsic goal orientation, task value and control of learning beliefs in learning to write, which in turn helped her become self-efficacious in her classroom performance (performance self-efficacy) and self-regulation control of her learning (self-regulatory efficacy).

Findings also reveal that students attributed these changes to the self-regulated strategies-based writing instruction, which emphasised the teacher scaffolding, the interactive learning environment and the development of SRL strategy knowledge. That is to say, the self-regulation model appeared to help these two learners easily master the writing knowledge and the use of different target strategies. For Lei, teacher scaffolding and peer collaboration apparently relieved her cognitive burden in generating ideas. The recursive instructional processes helped her become active in the classroom activities (e.g., peer discussion), improving their interest in feelings of the value of the task. Instruction in self-regulation (e.g., monitoring and self-evaluation) appeared to cultivate

more confidence in the two learners' task performance and metacognitive control, which in turn contributed to their active use of learning strategies and increased motivation to write. This reveals that the self-regulation process reduced the cognitive burden, anxiety and worries and helped these two students become more confident when they completed writing tasks. The interactive effect of self-efficacy, motivational belief and the use of SRL strategies lends support to the previous claim that the use of SRL strategies, application of motivation and academic achievement are affected by students' confidence in accomplishing a task during learning processes (Bandura, 1986, Zimmerman & Bandura, 1996). Many researchers (Bandura, 1991; Bruning et al., 2013; Caprara et al., 2008) have found that students' level of self-efficacy is associated with the self-monitoring and cognitive processing of different aspects of one's performances and the outcomes that flow from them. The qualitative findings indicate that students, who regard themselves as highly efficacious in their task performance, linguistic competence and metacognitive control, tend to harbour more value in their learning task, become active in their control of learning and achieve better in their academic outcomes. They might also exert greater efforts to deploy a range of SRL strategies to achieve their learning goals in EFL settings.

Corroborating the quantitative results collected in Phase Two, the qualitative findings provide further evidence of how the self-regulated strategies-based instruction impacted students' motivational beliefs and multidimensional self-efficacy including linguistic, performance and self-regulation aspects (Bruning et al, 2013; Fidalgo et al., 2008). The findings together echoed Cohen's (1998) claim that strategy-instruction "empower[s] students by allowing them to take control of the language learning process" (p. 70), which contributes to fostering strategic self-regulated writers in EFL contexts.

9.3.2 Understanding of what makes a good writer and the utility of SRL strategies

The qualitative data gathered from the pre interview showed that, pre intervention, both students did not have a clear understanding of writing strategies, and make a little reference to the use of SRL strategies. Lei had never heard of 'writing strategies' and reported using some 'writing skills' such as thinking about related ideas before writing and conducting spell-checking after that. However, she did not know that the conscious

deployment of these skills could be classified as a type of SRL writing strategies. Lei equated planning to thinking about more ideas and revising to checking spelling and grammar mistakes. One reason might be that she did not receive systematic instruction on how to use these writing strategies in the previous writing course. As she argued, teachers just briefly introduced these skills but did not indicate the usefulness of writing strategies nor demonstrate how to apply them in learning to write. Similarly Bin complained about an insufficient emphasis on, and practice of how to use, different strategies in learning to write. These findings echoed previous research such as Bai et al. (2014), which found that the dominant product-oriented writing instruction with a focus on model text analysis was not effective to teach students specific strategies that they can enact to come up with successful EFL composition. In other words, these Chinese students either did not know about writing strategies, or how to use them in the right context, to solve the problems they faced.

As expected, the two students mentioned that the success of writing a good composition mainly depended on writers' linguistic proficiency with a focus on vocabulary and grammar. Both students believed linguistic proficiency was a critical factor influencing the use and the understanding of writing strategies, as reported previously in many studies (Gu et al., 2011; Zhang et al., 2016). These findings corroborated quantitative results collected from Phase One (see also Chapter Seven), showing that the high writing-proficiency learners with strong linguistic knowledge of English had a better understanding of writing strategies compared with the low writing-proficiency counterparts.

Both students reported using cognitive and metacognitive strategies at different levels. Lei only briefly mentioned the use of text processing strategies and idea planning at a superficial level. In contrast, Bin had relatively a clear understanding of several cognitive and metacognitive strategies such as revising, goal setting and planning. She reported great preference for using goal-setting strategies with positive outcomes, which cultivated her sense of achievement and helped her recognise the usefulness of these writing strategies. The comparison of the two cases reveals that the high-proficiency student tended to deploy more metacognitive strategies than the low-proficiency one as reported in the quantitative analysis in Chapter Seven and some

previous studies (e.g., Harris et al, 2010; O'Malley & Chamot, 1990; Oxford, 2013; Zhang, 2008). This reveals that a good writer is someone who is metacognitively aware of the writing process (Griffiths, 2008), suggesting that learners' linguistic competence is a critical factor influencing their capability to perform high-order executive skills in managing, monitoring and evaluating their learning activities (Harris et al., 2010; O'Malley & Chamot, 1990)

Both students placed more value on teacher feedback because of their perceived authority in writing knowledge. Bin liked to share her writing with other students but she took a conservative attitude toward their feedback on her writing. Unlike Bin, Lei as a low-proficiency learner did not like to share her writing with her peers or to seek help from them because, she argued, "writing was an individual event". Both students appeared to have a low evaluation of peer learning but high expectation on, and trust in, teachers' feedback, which, as Bin argued, was professional and specific. The different attitude toward feedback from teachers and peers might be attributed to the teacher-centred classroom and fewer opportunities for peer interactive activities in writing courses at the tertiary level (H. Zhao, 2010).

For motivational regulation, only Bin mentioned using motivational self-talk, particularly performance self-talk, such as getting a better grade in a writing test or improving her writing competence as an English major. For Bin self-reinforcing verbal statement were seen as helping her in academic activity. These external reasons reflected a common situation of Chinese EFL learners who were driven by their external goal orientation in learning to write rather than have intrinsic interest in writing itself (L. Yang & Gao, 2013; Zhan, 2012).

After the intervention, the two cases made significant improvements in writing scores for writing at the post-test and delayed post-test. This might be attributed to the positive effect of the four-month intervention where the systematic instruction may have enhanced the learning process. Appropriateness and flexibility in strategy use, appeared to cultivate the students' confidence in task performance and active control of learning, leading to better academic outcomes. The responses of the two students suggest they had developed a better understanding of SRL strategies and a strong awareness of using

the targeted strategies to help them solve different learning problems or complete writing tasks. The most evident change was in what they said made a good writer. After the intervention both students said they regarded the capability of using writing strategies as an important factor affecting their production of a good written text. For example, Lei mentioned that the ability to use ‘writing strategies’ to solve different learning problems was an essential criterion of judging a good writer. For her, an advanced writer not only had a high level of English proficiency, but was also an independent and flexible strategy user. When Bin described the quality of a good writer, she changed her words from ‘writing skills’, with a focus on linguistic aspects, to ‘writing strategies’ thus including the use of metacognitive and social strategies to help writing. These changes suggest that both students had developed a thorough understanding of what factors influenced the production of a good essay, which included not only linguistic aspects but also more complex variables relating to metacognition, regulation of motivation and social behaviour. The change of understanding reveals that the two students had developed a better comprehension of the nature of writing, which has been characterised as a complex, recursive process with multiple dimensions (Flower & Hayes, 1981; Manchón, 2009). This indicates that it is necessary to cultivate learners’ capability to use different learning strategies to solve these writing problems in a more flexible and effective way.

In addition, the two students reported using a richer repertoire of writing strategies and a better understanding of how to deploy them in the learning-to-write process after the intervention. Bin, with high linguistic proficiency, demonstrated skilful orchestration of the metacognitive strategies with a clear understanding of when and how she could use evaluation and monitoring strategies to complete some specific writing tasks. In her spare time, she also tried to apply these metacognitive strategies (e.g., planning, goal setting and evaluating strategies) in other situations such as writing a novel. The successful generalisation of these metacognitive strategies in other genres, to a certain degree, enhanced her writing motivation (i.e., intrinsic goal orientation and task value) and increased her confidence in task performance (performance self-efficacy) and metacognitive control (self-regulatory efficacy) in learning to write. Likewise, Lei reported a clear understanding of what writing strategies referred to and demonstrated a certain capability to orchestrate some SRL strategies more extensively. For example,

after writing, she reported she would not only check grammatical and spelling errors but also evaluate whether her written text met the requirement of the task. This cognitive process was not referred to in her pre-interview. She also said she would evaluate whether the composition achieved the task goal by using a smart note or graphic organiser. They both attributed these positive changes to the self-regulated strategy-instruction, which provided sufficient opportunity for them to develop a thorough understanding of the targeted strategies and orchestrate these strategies in different writing tasks with teachers' scaffolding and modelling. According to Gu (2007), strategy orchestration is regarded as a dynamic process of metacognitive regulation in which learners play an overall executive role in making strategic choices based on the analysis of task, self, and context and then they monitor, evaluate and modify strategies to solve the problems in question. Therefore, this explicit instructional model is helpful to facilitate the internalisation of procedural metacognitive knowledge about writing strategies and promoted learners' self-evaluation. Findings therefore lend support to the essential role of strategy orchestration for optimising the instructional outcomes and developing self-regulated writers (A. Cohen & Macaro, 2007; Chamot, 2005; Plonsky, 2011; Zhang, 2008).

Qualitative data further reveal that the effect of self-regulated strategies-based instruction was under the influence of learners' linguistic proficiency, as evidenced in many previous studies (e.g., De Silva & Graham, 2015; Gu et al., 2011). In particular, Bin with high writing proficiency reacted more favourably to the integration of the self-regulation process in strategy instruction. She reported that the self-regulation process with a focus on metacognitive control was helpful for her to monitor, evaluate and reflect their mastery and usage of the target strategies. According to Zhang (2008), good and poor second-language learners distinguished themselves in the degree and the range of using metacognitive strategies for problem-solving, which "needs to be materialized through scaffolded practice that most often involves learner training through strategies-based instruction programmes" (p. 265). These findings enriched our knowledge of how learners with different proficiency levels reacted to and benefited from the self-regulated strategy instruction in a varying degree (see Griffith, 2013, for more information the characters of a good language learner).

Although the proficiency difference to a certain degree affected students' reaction to the self-regulated strategy instruction, findings together provided more empirical evidence to the positive effects of self-regulation process in the explicit strategies-based writing instruction as discovered in some previous studies in L1 (Brunstein & Glaser, 2011; Harris & Graham, 2010) and L2 (Ching, 2002; Nguyen & Gu, 2013) writing settings. For instance, Ching (2002) revealed that the integration of self-regulation into L2 strategy instruction was useful to foster students' sufficient self-awareness of their own learning process, which in turn contributed to the active use of strategies and positive academic outcomes. Nguyen & Gu (2013) found that strategies-based instruction with a focus on metacognitive self-regulation improved learners' autonomy in both learning and their writing ability. Although the essential role of metacognitive control has been acknowledged in many empirical studies, not sufficient attention has been given to the instruction of self-regulating process, particularly the metacognitive instruction in EFL writing contexts (Zhang & Zhang, 2013).

Also evident is that the two students were willing to use the focused strategies after the intervention. Consistent with Brunstein and Glaser's (2011) research in L1 writing contexts, this study reveals that teaching strategies for composition along with self-regulation methods fostered students' confidence in their course performance and metacognitive regulation in completing a writing task, which in turn increased their intrinsic motivation in the process of writing, as revealed in some studies. This reciprocal relationship between strategy instruction and psychological development appeared to contribute to the improvement of writing performance, reflected in an increase in their writing test scores at the post-test.

The qualitative data also reveal the beneficial effect of integrating the social cultural factors into the strategy instruction for developing independent, strategic writers. First, both students reported that they benefited from the social mediation of collaborative activities during the treatment. This suggests that the strategic instructional model facilitated the enactment of the targeted strategies in the writing course.

In addition, the two students gave positive feedback on the collaborative activities with peers in classroom environments, in which they became engaged in peer discussion or

seeking help from other students with more confidence and motivation. These findings indicate that the scaffolding and mediation facilitated students to lighten their cognitive and psychological burden. Thus the responsibility for applying and recruiting the target strategies, accompanying knowledge or skills and self-regulation procedures gradually shift from instructor to students (Harris et al., 2011). Therefore, these two students reported becoming more proactive in their own learning process via utilising all possible social resources to facilitate their learning.

Intrinsically, these findings reflect the sociocultural nature of strategic learning, which emphasises the importance of co-regulation in the development of SRL (Lantolf & Poehner, 2008). In other words, the collaborative instructional procedures with peer supports provided students and their teacher with opportunities to share thinking, make decision and achieve learning goals “in a shared or intersubjective task environment where each brings expertise and control to the task” (Winne & Hadwin, 2010, p. 507). Through this co-regulation, the individual learners gradually took up the knowledge and skills, which triggered the realisation of their self-reflection and self-evaluation. This study revealed the development of an independent and strategic learner from a co-regulation to a self-regulation, where s/he can independently perform “behaviors, actions, and thinking associated with SRL” (Winne & Hadwin, 2010, p. 507).

The qualitative findings have demonstrated the essential role of sociocultural theory in promoting positive effects of explicit strategies-based writing instruction in EFL settings. That is to say scaffolding and mediation from teachers and peers are more valued as the results of the intervention programme. As some researchers (Graham & Harris, 2014; Macaro, 2001; Plonsky, 2011) argued, explicit strategy instruction should be developed with sufficient opportunities for students to get involved in different activities such as awareness-raising, scaffolding and evaluation. From another perspective, the essential role of scaffolding from teachers indicates that the success or failure of strategy instruction is under the influence of instructors’ individual differences such as whether these EFL teachers are equipped with necessary instructional skills and knowledge to provide support and help to students (Gu, 2007; O’Malley & Chamot, 1990). Therefore it is necessary to provide a systematic professional training for EFL practical teachers in terms of how to implement strategy

instruction and how to provide sufficient scaffolding and mediation in a collaborative classroom environment, which is a prerequisite of a successful writing instruction, as argued by many researchers (Zhang, 2008; Teng, 2016).

CHAPTER TEN

OVERALL DISCUSSION AND CONCLUSION

This chapter presents a summary of the key findings and an integrated discussion of the main study. Then general conclusions of each phase are described followed by a consideration of theoretical and pedagogical implications. Limitations of this study and recommendations for further research are discussed.

10.1 Summary of Findings and Overall Discussion

This empirical study aimed to foster self-regulated L2 writers from the perspectives of SRL strategies, motivational beliefs, self-efficacy and writing performance. Phase One of the main study aimed to map out the current situation of Chinese learners' reported use of SRL strategies and their perceived motivational beliefs and self-efficacy in EFL writing. Findings reveal that Chinese EFL writers reported using different SRL strategies at an imbalanced level and year level was a factor influencing their use of SRL strategies. In addition, students' linguistic proficiency was a critical factor affecting their reported use of SRL strategies and perceived motivational beliefs and self-efficacy. The quantitative results also found that both SRL strategies and motivational belief generated a large predictive effect on students' writing performance while self-efficacy was a moderate predictor in EFL contexts.

Phase Two of the main study was designed to implement self-regulated strategy-focused writing instruction for developing self-regulated EFL writers. This was a quasi-experimental research design with a triangulated approach to collect rich data by means of multiple instruments. This range of measures included questionnaires, writing tests, classroom observation, students' semi-structured interviews and their journals. Data together reveal that self-regulated strategies-based writing instruction was successful in helping the students gain more awareness of the effectiveness of SRL strategies from a multi-dimensional perspective; have a better understanding of a rich repertoire of SRL strategies; orchestrate these strategies taught in the writing course; develop a positive attitude toward writing with high motivation and positive self-efficacy; and enhance their writing performance.

10.1.1 SRL strategies, motivational beliefs and self-efficacy

Findings from Phase One reveal that successful writing processes require the co-function of multidimensional variables relating to cognition, metacognition, motivation and social environments. Quantitative results found that Chinese EFL writers reported low levels of using SRL strategies, particularly metacognitive (e.g., goal-oriented monitoring) and social behaviour strategies (e.g., peer learning).

Year level was a significant factor affecting the use of SRL strategies, revealing the dynamic nature of self-regulation in EFL writing. Results also found that students' linguistic proficiency was another significant factor distinguishing their use of SRL strategies and their psychological factors. As mentioned earlier, the high writing-proficiency students developed a much larger repertoire of cognitive (i.e., text processing), metacognitive (i.e., idea planning, goal-oriented monitoring) and motivational regulation strategies (i.e., motivational self-talk) than the low writing-proficiency students. Regarding psychological factors, the students with high writing proficiency reported holding a collection of adaptive beliefs and attitudes that drove their willingness to engage in and persist at academic tasks. These students added more value to tasks and material in writing courses and found them interesting and useful to know. They also tended to be highly self-efficacious individuals who were confident in their linguistic competence and task performance.

Bivariate analyses further reveal that the use of SRL strategies was under the influence of psychological factors such as motivational beliefs and self-efficacy. Multiple regression analyses provided somewhat mixed support for the predictive relations of SRL regulation strategies, motivational beliefs and writing self-efficacy on writing test scores. Results show that SRL strategies were a strongest predictor of students' writing performance as compared with motivational beliefs and self-efficacy. This suggests that writing performances is contingent upon the use of SRL strategies, which play an essential role in mobilising, directing and sustaining learning efforts, therefore positively affecting students' academic performance (Manchón et al., 2007).

All these results indicate that the aforementioned variables do not work in isolation in the self-regulating process but act together in affecting learning outcomes in EFL

writing. The empirical findings corroborate Zimmerman and Bandura's (1994) contention that the development of self-regulated writers needs the combined contribution of SRL strategies, motivation and self-efficacy. In other words, students' ability to regulate their learning is a function of their capacity to effectively use an array of strategies to regulate their cognition, metacognition, behaviour as well as motivation across diverse academic contexts (Andrade & Evans, 2013; Zimmerman, 2002).

10.1.2 Self-regulated strategies-based writing instruction

The mixed-methods data collected in Phase Two reveal that the four-month self-regulated strategy instruction had positive effects on increasing Chinese students' use of SRL strategies, motivational beliefs, self-efficacy and writing performance. The strategy instruction with the self-regulation process not only developed students' systematic knowledge of SRL strategies, but also helped them become active and self-efficacious in regulating their learning processes with more motivation.

In particular, students from the experimental group outperformed their counterparts in the control group. This occurred in terms of deploying a wider range and higher frequency of SRL strategies such as idea planning, evaluating mastery of writing knowledge and monitoring writing activities directed by specific learning goals. These findings are corroborated by the case studies, which found that both students with high and low writing proficiencies benefited from the explicit writing instruction. Qualitative data collected from the interviews and the classroom observations reveal that the intervention stimulated participants' willingness and capability to use a range of SRL strategies, particularly metacognitive strategies. As revealed in the students' interviews and reflective journals, these beneficial changes were attributed to the integration of self-regulated process in the strategies-based instruction. In other words, students from the experimental group were provided with opportunities to monitor and reflect their learning and performance, which helped them to become more reflective in their learning process, fostered their awareness of the usefulness of SRL strategies and increased their willingness to orchestrate the focused strategies. These positive changes, in turn, contributed to improving students' writing performance, as revealed in many previous studies in L1 writing settings (see Harris & Graham, 2009).

It is also worth mentioning that these two students tended to use more social strategies such as peer learning. This might be attributed to the opportunity for interactive classroom instruction, such as peer discussion and the collaborative learning environment with teacher's scaffolding throughout the recursive instructional process. In other words, the social mediations, in the form of teacher-learner and peer interactions in classroom environments, encouraged students to become more engaged with capable others (e.g., teacher) and their peers or through the use of other SRL strategies in learning processes. The inclusion of peer learning as a focused strategy of the intervention draws attention to the importance of the sociocultural dimensions in SRL/LLS research as advocated by many language researchers (Bown, 2009; Coyle, 2007; Griffith & Oxford, 2014; Englert et al., 2006; Lei, 2007; Donato & McCormick, 1994) for promoting effective learning from social, cultural and interpersonal process. Given that insufficient attention has been given to the instruction of social behaviour strategies in EFL writing contexts, more studies are warranted.

With regard to motivational regulation strategies, the experimental group students tended to use different ways to bring about more fun when completing writing tasks (interest enhancement). Although interest enhancement was not the focused strategy in writing instruction, the significant improvement of this group show that the strategies-based instruction, with a focus on metacognitive and social strategies, helped students to develop more intrinsic, situational interest and to sustain or increase their learning efforts. One of the plausible reasons is that the development of using focused SRL strategies increased students' willingness or efforts to use some motivational regulation strategies to increase their persistence in completing a task. This assumption is corroborated by the significant relationships between motivational regulations strategies and other dimensions of SRL strategies, as discussed in Chapter Seven, and the interviews reported by both high and low proficiency students.

The mixed-methods data also reveal the substantial effect of the self-regulated strategies-based instruction programme in promoting students' motivational beliefs (e.g., task value, control of learning) and writing self-efficacy (e.g., performance self-efficacy). The positive findings together supported A. Cohen's (2008b) argument for the function of strategy instruction, which "is intended to support students in their effort

to become more effective and efficient foreign language learners through gaining greater awareness of their language strategy repertoire” (p. 46).

In terms of writing performance, the quantitative data show that students from the experimental group made significant gains at the post-test with a large effect size. Such a positive effect was sustained at the delayed post-test after one month without subsequent exposure to the strategy treatment. Although the correlation strength declined, the findings demonstrate the retention of the gains in writing test scores at the delayed post-test. The result helped to rule out other confounding factors, which might increase students’ writing performance at the post-test.

It is also worth noting that the pre-existing writing proficiency collected from the pre-test was a significant factor influencing students’ writing test performance. This suggests that writers’ increased knowledge of SRL strategies may promote their writing test performance when pre-existing language proficiency is perceived as a mediation tool by which the instruction of LLSs can take place. In this with Zhang’s (2008) contention, this study argues that it is necessary to take learners’ linguistic competence into consideration while implementing strategies-based writing instruction.

Stated succinctly, all these empirical investigations have not only demonstrated that the use of SRL strategies varied with the tasks and the individuals’ internal and external conditions, but also acknowledged the essential role of the self-regulated strategies-based writing instruction in improving students’ academic outcomes and promoting learners’ motivation and self-efficacy. These findings together provide empirical evidence for the goal-oriented nature of strategies, the clustering of strategies that characterised strategy deployment in the performance of language learning tasks and the role of learners’ psychological variables (motivation and self-efficacy) as motives and antecedents of strategy use (Harris et al., 2011). Furthermore, the instruction was integrated into the regular writing course, which would provide more valuable information about the feasibility and effectiveness of incorporating strategies-based instruction into the current teaching syllabuses or pedagogies at the tertiary level. All these results provide robust evidence to the notion that self-regulated strategy writing instruction is successful in helping develop a high level of cognitive maturity, increase

knowledge about the characteristics of good writing and form positive attitudes about writing and develop autonomous, reflective, self-regulated use of effective writing strategies with positive academic outcomes (Graham & Harris, 1996, Graham & Perin, 2007; Harris et al., 2011; Plonsky, 2011). Taken together, the self-regulated strategies-based writing instruction has contributed to fostering self-regulated EFL writers who are independent, capable, reflective and goal-oriented with lifelong learning capability.

10.2 Theoretical Implications

This experimental study has several theoretical implications. The project, as a whole, makes a contribution to advancing the field of EFL writing research by introducing SRL theory from educational psychology to the field of second-language education, especially EFL writing. First, this study has provided empirical support for the sociocognitive view of SRL (Schunk, 2001; Zimmerman, 2000), which emphasises the proactive engagement of self-regulating processes under the triadic interplay of individual, behaviour and environments. This empirical research collectively reveals how human behaviour, the regulation of cognition and other personal factors (affects) operated as interacting determinants of each other in the triadic reciprocity loop, influencing learners' academic performance (Bandura, 1989; Zimmerman, 2011).

This study also lends credence to the multidimensional nature of self-regulation that includes cognition, metacognition, social behaviour and motivational regulation. The findings reveal that students' ability to regulate their learning is a function of their capacity to effectively use an array of strategies to regulate these dimensions across diverse academic contexts (Andrade & Evans, 2013). This study, theoretically, supports an increasingly strong argument for viewing motivational regulation as a prominent facet for developing self-regulated learners (Schunk & Zimmerman, 2008).

Third, the significant predictive correlations of SRL strategies, motivation and self-efficacy on writing performance reveal the sociocognitive nature of the self-regulating process, in which human behaviour, cognition and other personal factors (affects) operate as interacting determinants of each other in the triadic reciprocity loop, affecting learners' academic performance (Bandura, 1989; Zimmerman, 2011). Such interplay reflects how the self-regulating mechanism mediates and interacts with

individuals' motivational factors (e.g., extrinsic goal orientation, task value, control of learning) (Pintrich, 2004). As Schunk and Zimmerman (2008) posited, motivational variables serve as precursors, mediators, and concomitant outcomes of SRL, playing an essential role in promoting the use of learning strategies and the development of metacognitive commitment. The active interplays of these variables lend support to the sociocognitive view of self-regulated learners who can “set superior goals proactively, monitor their learning intentionally, use strategies effectively, and respond to personal feedback adaptively, not only attain mastery more quickly, but also are more motivated to sustain their efforts to learn” (Zimmerman, 2013, p. 135).

The successful application of the self-regulation model reveals the characters of the SRL process, which is “moving from observation, through emulation of others usually involving guided practice, to self-control, and finally to self-regulation” (Winne & Hadwin, 2010, p. 506). The significant effect of the regulation model reflects the social cognitive view of human beings as agents who intentionally activate, sustain and adjust cognitions, affects and behaviour to achieve goals of learning (Zimmerman, 2011). In addition, this reciprocal model reveals the essential role of vicarious learning within sociocognitive theory, which stresses the significant role of observational learning, imitation and modelling through a continuous interaction between behaviours, personal factors (e.g., cognition) and learning environments (Bandura, 2006).

From another perspective, this instructional model reflects a sociocultural view of self-regulation, underscoring the mentoring of a learner by more capable others (e.g., teachers, or peers). According to Lantolf and Poehner (2008), a sociocultural perspective of self-regulation draws on the development of human capacity through the dynamic interaction of social settings, cognition and language development. This study reveals that the integration of teacher scaffolding and peer mediation through interactive classroom environments relieved individuals' psychological and cognitive burdens when they completed writing tasks. Therefore, the sociocultural perspective provides us with a new lens to explore the interaction of self-regulation during the writing processes at “the intersection of individuals, culture, and activity” (Englert et al., 2006, p. 208). This study echoes Griffith and Oxford's (2014) argument for exploring LLSs from “learners' resilience in sociocultural contexts” (p. 8). Such a view helps

account for “how writing has become socially constructed in different cultural groups” (Englert et al., p. 218). This study as a whole not only reveals that SRL was a socioculturally situated construct but also provides evidence for the essential role of mediation and teachers’ scaffolding in developing human capacity through the dynamic interaction of society settings, cognition and language (Winne & Hadwin, 2010).

It is also worth noting that this project was not designed to validate the sociocognitive and sociocultural theories but to employ multiple perspectives to explain what and how SRL strategies can be learned and taught more effectively in L2 writing contexts. This study echoes Canagarajah’s (2007) contention, arguing for a need to “nestle and reframe a cognitive view of language acquisition within a socially-imbedded system” (p. 936). The empirical exploration of the self-regulating process from both sociocognitive and sociocultural perspectives helps us have a better understanding of how to develop self-regulated writers with lifelong learning strategies in L2 contexts.

10.3 Pedagogical Implications

From a practical perspective, the exploration of SRL with a focus on SRL strategies and psychological factors lends itself to some pedagogical implications. First, regarding the newly-developed questionnaire (WSSRLQ), this instrument might be applied as a self-assessment tool for students to appraise the degree of, and cultivate their awareness of, using SRL strategies from a holistic perspective. Based on the scores calculated from the instrument, EFL learners, from one aspect, can get an overall assessment on their utility of SRL strategies from cognitive, metacognitive, social behaviour and motivational regulation dimensions. From another aspect, they may further adjust or deploy more SRL strategies to achieve their learning goals. Accordingly, they may tend to become more proactive learners in order to monitor and regulate their learning performance. In addition, L2 researchers can use the WSSRLQ as an empirical research instrument, such as pre-test/post-test to elicit empirical data of SRL strategies as reported by L2 learners. The overall mean scores of SRL strategies determine the level of self-regulation. Researchers may predict how well these students can succeed in a given task or achieve in an academic pursuit. The accumulative scores may serve as evolutionary indices for evaluating the effectiveness of a strategies-based writing

intervention or mapping out the trajectory of SRL strategies, spanning a certain research period. Third, it is also necessary for the English instructor to diagnose students' use of SRL strategies as a precursor to successful intervention. This scale will be readily available to classroom practitioners as a diagnostic tool to evaluate the strengths and weaknesses of students' deployment of SRL strategies prior to writing instruction. In addition, the instrument can be used in classrooms as a practical tool for diagnosing students' preferences when it comes to choosing the instruction of writing strategies for effective learning in authentic academic contexts. As Wolters (2013) posited, "knowing what strategies are preferred or used most often by students within more authentic academic contexts provides insight into which ones might best be used as the target of instructional interventions" (p. 201). Results from the WSSRLQ can be utilised by EFL teachers as a diagnostic source, which would provide insight into which strategies might be the best to be taught to their students in classrooms. By referring to the pragmatic information elicited from the questionnaire, EFL practitioners may be empowered to adjust their pedagogical goals to enhance the effectiveness of strategies-based writing instruction.

Writing journals as an approach of data collection during the case study can be used as a reflective learning tool for EFL students. Keeping writing journals may enable EFL learners to understand their own learning process and deepen the quality of learning in the form of critical thinking or develop a questioning attitude, as evidenced in some previous studies (e.g., Boud, 2001). In addition, students are also encouraged to share their writing journals in the classroom to foster reflective and creative interaction during classroom collaboration.

With regard to the writing intervention, the successful replication of the SRSD model in EFL contexts lends support to the validity, reliability and stability of the self-regulation instructional process in both L1 and L2 settings. Findings extend our understanding of self-regulation theory and the utility of the mixed-methods approach to evaluate EFL students' SRL development.

At the level of the curriculum and course design, it is suggested that the self-regulated strategy model be integrated into regular writing instruction, where writing teachers can

select specific writing strategies based on the requirement of curriculum, writing task and genre or results of diagnose of students' use of SRL strategies to design individualised strategy instruction (Manchón et al., 2007). Practical EFL instructors are advised to apply the six recursive stages of SRSD model to their regular writing courses, from developing and activating background knowledge, discussing, modelling, memorising and supporting, to students' independent performance (Harris et al., 2011).

As an extension of this implication, a factor that could make learning more cooperative would be to encourage learners to work together in groups, coupled with teachers' continuous scaffolding and mediation to sustain the effect. For example teachers are encouraged to promote peer collaboration such as peer feedback during learning to write, which might leverage their role as mediators of learning alongside classroom teaching in order to develop independent learners.

Third, this study also provides empirical evidence in favour of teaching clusters of SRL strategies, tailored for each individual rather than solely "modelled on a notion of universal successful learners or high proficiency listeners" (Manchón et al., 2007, p. 239). Likewise, EFL instructors are encouraged to continue their quest for implementing multi-dimensional strategies-based writing instruction, which not only focuses on cognitive and metacognitive evaluation but also integrates social strategies (e.g., peer learning or feedback handling) and motivational regulation strategies (e.g., enhancing interest or self-encouraging skills). This implies that writing strategy instruction should be sensitive to students' needs and should aim to equip students with a range of SRL strategies from different dimensions for their successful completion of different writing tasks, as suggested by many researchers (Andrade & Evans, 2013; Lam, 2014; Sasaki, 2004).

Fourth, this study further reveals the necessity to take learners' psychological conditions (task value, intrinsic and extrinsic goal orientation and self-efficacy) into consideration when teachers implement strategies-based writing instruction. It might make more pedagogical sense in helping students make effective use of strategies if they feel motivated and confident in the completion of language learning tasks, which may produce more academic gains in writing (Schunk & Ertmer, 2000, Woodrow,

2011; Zimmerman, 2011). In addition, some necessary scaffolding and mediation practices are suggested to be integrated in regular writing teaching. This might help students relieve their cognitive and psychological burdens when they complete writing tasks. For example, EFL instructors are encouraged to make full use of peer collaboration such as peer discussion for brainstorming. Meanwhile, it is suggested that teachers might prepare procedural tools with some metacognitive prompts in modelling and supporting stages for individuals' emulation and self-regulation (e.g., evaluation and monitoring). These meditative forms of instructional practices might empower students to effectively monitor and evaluate their own learning, which helps them become more self-reflective and autonomous learners with increased confidence and motivation in learning to write in L2 environments (Lantolf & Poehner, 2008; Lei, 2007, 2012).

10.4 Limitations and Recommendations

Although a wide range of data was collected, a number of issues still remain. This concerns strategy solicitations and specific instruction approaches due to the practical constraints. First, the measurement of SRL strategies was based on self-report data for profiling the current situation of Chinese students' use of SRL strategies in a large scale. Although the self-report scale served its purpose in the current study, this single method of strategy solicitation might fail to provide rich information of SRL strategies, as argued by some researchers (A. Cohen & Macaro, 2007; Oxford et al., 2014). For example, participants may forget some strategies they have used in the past or they may report using some strategies which they have never used before or they may misunderstand the items in the questionnaire. Therefore, multi-methods for data collection (e.g., interview, stimulated recall after completing a task, reflection journal, among others) are recommended to produce more comprehensive assessment of SRL strategies and add strength to the data triangulation.

Second, although this study investigated students' reported use of SRL strategies from four dimensions, the instrument devised solicited only nine specific strategies, without providing all possible strategies used in learning to write or composing processes in L2 settings. Further studies along this line need to include other learning strategies (e.g.,

help seeking, environment managing and self-encouragement) in this instrument, and as a consequence the information might provide a more holistic picture of students' use of a wider range of SRL strategies.

In terms of the research sample, this study recruited only English-major students in Chinese universities. This prevented the generalisation of these findings to other populations, such as younger students from schools or other majors in universities. Although mixed-methods data indicated some signs of a pattern of EFL writers' self-regulation processes and the effectiveness of strategy-instruction, these results could not be generalised beyond the specific learners and contexts involved in the present study. In addition, convenience sampling and purposive sampling further impeded the generalisation of these findings. Further studies are recommended for expanding the sampling methods and participant pool such as students of different majors, age groups or other EFL ethnicities.

In regard to writing performance tests, this only adopted a one-site writing test with a given-topic as a way to reflect students' writing performance. Scores collected may not represent students' real writing competence. Further studies might include different writing tasks and writing genres or the integration of course scores as criteria for evaluating students' achievement. These multiple sources might help better reveal learners' writing performance.

Regarding data analyses, findings collected from multiple regression have identified several factors (i.e., SRL strategies, motivational beliefs and self-efficacy learners) perceived as important in affecting EFL learners' writing performance. However, the integrated effect of these variables has not yet been fully addressed in the present study. For example, how SRL strategies, motivational beliefs and self-efficacy play a combined function (direct and indirect effects) in influencing learners' academic performance. To develop a fuller understanding of the SRL process, future research that includes other factors such as social contexts and affects is also warranted. For example, other measures such as structural equation modelling (SEM) are recommended to explore the mediation effects of SRL strategies, motivational beliefs and self-efficacy on learners' writing performance.

Another limitation is that the self-regulated strategies-based writing instruction only targeted four specific SRL strategies relating to metacognition, cognition and social behaviour. However, motivational regulation strategies, as a salient component of the SRL model, were not included. Therefore, one important goal for future research is to implement EFL writing instruction with a focus on other dimensions of SRL strategies relating to motivational regulation and/or social behaviour strategies for developing self-regulated writers (Teng & Zhang, 2016b).

As mentioned earlier, the intervention study recruited only second-year English majors from one medium ranking university in China. Another area of research would be to examine variations in participants at different proficiencies and grade levels during the intervention study. The question can thus be raised: Would similar results be obtained if this treatment were replicated with students in a L2 context at different levels of proficiencies or grades? The advantages of looking across different year levels would be in capturing the dynamic development of SRL. In addition, the intervention within this study mainly focused on writing tasks in one genre (argumentation) in classroom environments, making it impossible to look at the impact of different text types on the effectiveness of strategy instruction. It might be interesting to investigate whether different writing tasks and genres exert a differential influence on learners' self-regulation development and their academic performance. This also appears to be an area requiring further inquiry. Therefore, any further research in this area should, in particular, include different levels of experimental groups and genre-based writing tasks for increasing the generalisability of findings and to better understand the dynamic nature of SRL (Zimmerman, 2013).

Although positive developments were found after the four-month treatment in this study, the time span was not long enough to document a systematic change in the self-regulating process. Many researchers have contended that the awareness of strategy use requires a degree of sophistication and takes time. This, therefore, calls for longer time to sustain the effectiveness of the intervention (Manchón et al., 2007). Extending the research to longitudinal studies over a much longer period of time would provide even richer data and insight into the effects of length of study on behaviour and academic changes.

Appendices

Appendix A: Participant Information Sheet and Consent Form for Dean

PARTICIPANT INFORMATION SHEET

(Dean)

Project Title: Fostering Strategic Second-Language Writers: A Study of Chinese English-as-a-Foreign-Language (EFL) Writers' Self-Regulated Learning Strategies, Self-Efficacy and Motivational Beliefs

Researcher: Lin Teng

Researcher introduction

My name is Lin Teng, a PhD candidate in the School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland. I am conducting research on self-regulated learning (SRL) strategies in English as a foreign language (EFL) writing.

Project description and invitation

Self-regulated learning is defined as learners' participation in learning processes – metacognitively, motivationally, and behaviourally – that is, the proactive engagement in a task. It is essential in promoting academic achievement and the cultivation of independent learning. This project attempts to foster self-regulated EFL writers from the perspectives of their use of SRL strategies, motivational beliefs, self-efficacy and writing performance.

This empirical study is composed of two phases. Phase One aims to document the current situation of Chinese EFL writers' use of SRL strategies, motivational beliefs and self-efficacy. Phase Two aims to implement and evaluate self-regulated strategies-based writing instruction.

I would like to invite your university, English teachers and undergraduate students to participate in this research. Your permission to contact them and distribute information is being sought.

Faculty involvement

Your permission and cooperation are the prerequisites of conducting this project. I am requesting your permission to get access to EFL teachers and students. First, I am seeking your consent to approach EFL teachers on your behalf and attend a faculty meeting to explain the research to EFL teachers and get help from them to spread the research information to students and deliver the Participant Information Sheets (PISs) and the Consent Forms (CFs). Later, I will return to collect these forms from your site. Second, I would like to request the use of classes or a meeting room for the intervention and interviews. All the procedures will be discussed in detail with potential participants. I would also like to get your assurance that participation or non-participation will not affect teachers' or students' career, future employment, grade, and academic performance in any way. Additionally, I would like to give my assurance that those who do not participate will not be disadvantaged in any way.

Teacher involvement

In Phase One (09/2013–01/2014) of this project, teachers will be informed about the research project and be asked to circulate research information, the Participant Information Sheets (PISs) and the Consent Forms (CFs) to their students on behalf of the researcher.

If teachers are responsible for a writing course during the research period (09/2013–12/2013), they may be invited to join the strategies-based writing intervention. The voluntary teachers will be randomly allocated to an experimental group (two intact classes) and a control group (two intact classes). The teachers from the experimental group will be invited to attend weekly workshops (two hours per week) to help them learn how to explicitly instruct their students to use different SRL strategies.

During this stage, both the experimental group and the control group will be observed twice (1.5 hours each). The researcher will keep notes of their teaching practices based on the classroom observation checklist. This observation will be to obtain information about teaching practices, the instructional process, writing strategies, classroom activities and students' engagement.

Student involvement

Participants in Phase One (09/2013–01/2014) will be asked to complete three English questionnaires that focus on their self-reported use of SRL strategies and perceived self-efficacy and motivational beliefs. This will take 20–30 minutes to complete. Participation in Phase Two (09/2013–12/2013) will involve completing a 16-week writing intervention. Participants in the writing intervention will be randomly assigned into an experimental group and a control group. All the students from the two groups will be invited to complete:

- Given-topic writing tests (one hour for each). These students will be asked to complete three essays with assigned topics (related to life or learning) in class at the beginning, at the end of, and four weeks after the intervention;
- Writing instruction, in which students from the experimental group will receive a 16-week instruction (one session per week of 1.5 hours). The control group will receive the regular writing courses required by the university curriculum. In order to avoid potentially disadvantaging the participants of the control group, the researcher will provide the same writing intervention courses after the research project and all participants are welcome to join. The course material will be made available and the researcher will be ready to answer any questions and provide any help if participants need. If anyone does not take part in the intervention courses, it is assured that he/she will not be disadvantaged by this and there is no grade evaluation on the courses;
- Class observation, in which participants of the experimental group and the control group will be observed monthly (1.5 hours each) during the research period. This observation will be to obtain information about what happens in their normal teaching activities.

During the writing intervention, two students from the experimental group will be selected to take part in a follow-up case study. They will be invited to:

- Attend semi-structured interviews at the beginning and the end of the intervention. The interview will last approximately 20 minutes and will be audio-recorded. Students are free to not answer any questions they do not wish to answer, and to have the recorder switched off at any time. The audio will

be transcribed by the researcher. Once the transcription is done, students will receive a copy of the transcript to check, and will be invited to make any amendments and/or delete any statements.

- Keep journals about changes relating to their use of SRL strategies, motivation and self-efficacy during the intervention. Copies of participants' journals will be collected during the research period subject to students' consent.

All voluntary participants have an equal opportunity to be randomly chosen and there is no bias and unfairness in the process. If more students than required are recruited, a thank-you letter will be given to those who are not chosen and the reason will be clearly explained.

Data storage/retention/destruction/future use

Hard copy data will be securely stored in a locked cabinet at the University of Auckland and electronic data will be stored on the researcher's computer, which is password protected. After six years, all hard copy data will be shredded and the digital information will be deleted. The data collected from the research will be used for the researcher's PhD thesis at the University of Auckland, and may be used for academic publications, and conference presentations. If you would like to have a copy of the research findings at the end, please indicate this on the consent form, and I will send a summary to you.

Right to withdraw from participation

Once involved, all the participants are entitled to withdraw themselves or any data provided by them at any time before 1st January, 2014 without having to give a reason. They have the right not to answer any specific question and have the recorder turned off at any stage. The Dean will be required to give an assurance that participation or withdrawal will not affect the normal courses, grade, or relationship with the faculty.

Anonymity and confidentiality

Student participants will be asked to write a unique identification code, which can only be recognised by themselves. Each participant will be given a code with numbers ranging from 001 to 400 and a list will be maintained to link participants, via unique identification name with the questionnaires and writing samples. This information will be kept separately from the data and will only be known to the researcher. The anonymity of non-participants in group situations will be preserved and students who decline to join may choose to return a blank questionnaire. Confidentiality is assured. Information about the university and the faculty will be disguised. If the information participants provide is reported/published, pseudonyms or the unique identification name will be used to protect their identity. No identifying information and data collected from the research will be disclosed to a third party.

Thank you for taking the time to read this information sheet. If you have any inquiries or questions, please do not hesitate to contact me or my supervisors.

Yours sincerely,

Lin Teng

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Contact details

Researcher	Main supervisor	Co-supervisor
<p>Lin Teng School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland Gate 3, 74 Epsom Ave, Auckland. lt372@aucklanduni.ac.nz Ph: +64 09 623 8899 ext. 48463 <u>Local contact in China</u> Ph: +86 15804621426</p>	<p>Professor Lawrence Jun Zhang Associate Dean International Strategic Engagement, School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland Gate 3, 74 Epsom Ave, Auckland. lj.zhang@auckland.ac.nz Ph: +64 9 6238899 ext: 48750</p>	<p>Associate Professor Martin East Associate Dean Research Development, School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland Gate 3, 74 Epsom Ave, Auckland. m.east@auckland.ac.nz Ph: +64 0 9 373 7599 ext. 48345</p>

You may also contact the head of the School of Curriculum and Pedagogy, Professor Judy Parr, by jm.parr@auckland.ac.nz or +64 09 623 8899 ext. 88998.

For any queries regarding ethical concerns, you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland, 1142. Telephone: 09 3737599 ext. 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE
ON 10 APRIL 2013 FOR (3) YEARS, REFERENCE NUMBER 9067.

DEAN CONSENT FORM

(THIS FORM WILL BE HELD FOR A PERIOD OF 6 YEARS)

Project title: Fostering Strategic Second-Language Writers: A Study of Chinese English-as-a-Foreign-Language (EFL) Writers' Self-Regulated Learning Strategies, Self-Efficacy and Motivational Beliefs

Researcher: Lin Teng

I have read the Participant Information Sheet, and understood the nature of the research and why I have been invited to participate. I have had the opportunity to ask questions and have them answered satisfactorily.

- I agree to take part in the research.
- I understand that my participation is voluntary.
- I agree to provide research sites.
- I agree to allow the researcher to join a faculty meeting to explain the research.
- I agree to circulate the research information to EFL teachers.
- I agree to allow EFL teachers to join this research.
- I agree to allow undergraduate students to join this research.
- I understand that participation is voluntary.
- I assure that participation, non-participation or withdrawal will not affect career, employment, grade, academic performance, and relationships with the faculty.
- I assure that there is no grade evaluation on the writing intervention.
- I understand that student participants will be asked to write a unique identification code, which can only be recognised by themselves on questionnaires and a pseudonym will be used in all items submitted in Phase One and Phase Two.
- I understand that hard copy and digital data will be stored separately and securely for a period of six years and then destroyed.
- I understand that the data collected from the research will be used for the researcher's PhD thesis at the University of Auckland, and may be used for academic publications, and conference presentations.
- I understand that if the information provided by participants is reported/published, anonymity is assured and pseudonyms will be used to protect their identity.
- I understand that the information about the university and faculty will be disguised.
- I understand that no identifying information will be disclosed to a third party or the public.
- I wish to receive a copy of the research findings by email _____ . (If not, leave this blank.)

Name _____ Signature _____
Date _____ Email address: _____

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE
ON 10 APRIL 2013 FOR (3) YEARS, REFERENCE NUMBER 9067.

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Appendix B: Participant Information Sheet and Consent Form for Teachers

TEACHER PARTICIPANT INFORMATION SHEET

Project Title: Fostering Strategic Second-Language Writers: A Study of Chinese English-as-a-Foreign-Language (EFL) Writers' Self-Regulated Learning Strategies, Self-Efficacy and Motivational Beliefs

Researcher: Lin Teng

Researcher introduction

My name is Lin Teng, a PhD candidate at the School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland. I am conducting research on self-regulated learning (SRL) strategies in English as a Foreign Language (EFL) writing.

Project description and invitation

Self-regulated learning is defined as learners' participation in learning processes – metacognitively, motivationally, and behaviourally – that is, the proactive engagement in a task. It is essential in promoting academic achievement and the cultivation of independent learning. This project attempts to foster self-regulated EFL writers from the perspectives of their use of SRL strategies, motivational beliefs, self-efficacy and writing performance. This empirical study is composed of two phases. Phase One aims to document the current situation of Chinese EFL writers' use of SRL strategies, motivational beliefs and self-efficacy. Phase Two aims to implement and evaluate self-regulated strategies-based writing instruction.

You are cordially invited to join my PhD research. I have contacted your faculty and gained the permission to ask your involvement.

Teacher involvement

In Phase One (09/2013–01/2014) of this project, teachers will be informed about the research project and asked to circulate research information, the Participant Information Sheets (PISs) and the Consent Forms (CFs) to their students on behalf of the researcher.

If teachers are responsible for a writing course during the research period (09/2013–12/2013), they may be invited to join the strategies-based writing intervention (Phase Two). The voluntary teachers will be randomly allocated to an experimental group (two intact classes) and a control group (two intact classes). The teachers from the experimental group will be invited to attend weekly workshops (two hours per week) to help them learn how to explicitly instruct their students to use different SRL strategies.

During this stage, both the experimental group and the control group will be observed monthly (1.5 hours each). The researcher will keep notes of their teaching practices based on the classroom observation checklist. This observation will be to obtain information about teaching practices, the instructional process, writing strategies, classroom activities and students' engagement.

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If you are interested and want to join, please give your consent to be contacted by the researcher for detailed information in the CF attached.

Student involvement

Participants in Phase One (09/2013–01/2014) will be asked to complete three English questionnaires that focus on their self-reported use of SRL strategies and perceived self-efficacy and motivational beliefs. This will take 20–30 minutes to complete. Participation in Phase Two (09/2013–12/2013) will involve completing a 16-week writing intervention. Participants in the writing intervention will be randomly assigned into an experimental group and a control group. All the students from the two groups will be invited to complete:

- Given-topic writing tests (one hour for each). These students will be asked to complete three essays with assigned topics (related to life or learning) in class at the beginning, at the end of, and four weeks after the intervention;
- Writing instruction, in which students of the experimental group will receive a 16-week instruction (one session per week of 1.5 hours per session). The control group will receive the regular writing courses required by the university curriculum.

In order to avoid potentially disadvantaging the participants of the control group, the researcher will provide the same writing intervention course after the research project and all participants are welcome to join. The course material will be made available and the researcher will be ready to answer any questions and provide any help if participants need. If anyone does not take part in the intervention courses, it is assured that he/she will not be disadvantaged by this and there is no grade evaluation on the courses.

Data storage/retention/destruction/future use

Hard copy data will be securely stored in a locked cabinet at the University of Auckland and electronic data will be stored on the researcher's computer, which is password protected. After six years, all hard copy data will be shredded and the digital information will be deleted. The data collected from the research will be used for the researcher's PhD thesis at the University of Auckland, and may be used for academic publications, and conference presentations. If you would like to have a copy of the research findings at the end, please indicate this on the consent form, and I will send a summary to you.

Right to withdraw from participation

Once involved, you are entitled to withdraw yourselves or any data provided by you at any time before 1st January, 2014 without having to give a reason. You have the right not to answer any specific question and have the recorder turned off at any stage. Assurance has been given by the Dean that participation or withdrawal will not affect your relationship with your faculty or affect your career.

Anonymity and confidentiality

Confidentiality will be assured. If the information participants provide is reported/published, pseudonyms will be used to protect their identity. Information regarding the university and the faculty will be disguised. No identifying information or data collected from the research will be disclosed to a third party.

Thank you for taking the time to read this information sheet. If you have any enquiries or questions, please do not hesitate to contact me or my supervisors.

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Yours sincerely,

Lin Teng



Contact details

Researcher	Main supervisor	Co-supervisor
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You may also contact the head of the School of Curriculum and Pedagogy, Professor Judy Parr, by jm.parr@auckland.ac.nz or +64 09 623 8899 ext. 88998.

For any queries regarding ethical concerns, you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland, 1142. Telephone: 09 3737599 ext. 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE
ON 10 April 2013 FOR (3) YEARS, REFERENCE NUMBER 9067.

TEACHER CONSENT FORM

(THIS FORM WILL BE HELD FOR A PERIOD OF 6 YEARS)

Project title: Fostering Strategic Second-Language Writers: A Study of Chinese English-as-a-Foreign-Language (EFL) Writers' Self-Regulated Learning Strategies, Self-Efficacy and Motivational Beliefs

Researcher: Lin Teng

I have read the Participant Information Sheet, and understood the nature of the research and why I have been invited to participate. I have had the opportunity to ask questions and have them answered satisfactorily.

- I agree to take part in the research.
- I understand that participation is voluntary.
- I agree to distribute the Participant Information Sheets and Consent Forms on behalf of the researcher to students.
- I understand that the Dean has given assurance that participation or withdrawal will not affect my relationship with my faculty or affect my career.
- I agree/don't agree to take part in Phase Two: writing intervention.
- I understand that I will be randomly allocated to either an experimental group or a control group in Phase Two.
- I agree to take part in the teacher training after my working hours, if I am allocated to the experimental group in Phase Two.
- I understand that the teacher training includes four weekly workshops (two hours per week) to help me learn how to explicitly instruct students to use different SRL strategies.
- I agree to have my class observed (1.5 hours) by the researcher monthly during the intervention.
- I understand that the researcher will keep note of my teaching practices and classroom activities.
- I understand that I have the right to withdraw myself or any data provided by myself at any time before 1st January, 2014 without explanation.
- I understand that hard copy and digital data will be stored separately and securely for a period of six years and then destroyed.
- I understand that the data collected from the research will be used for the researcher's PhD thesis at the University of Auckland, and may be used for academic publications, and conference presentations.
- I understand that if the information I provide is reported/published, pseudonyms will be used to protect my identity.
- I understand that information regarding the university and faculty will be disguised.
- I understand that no identifying information will be disclosed to a third party or the public.

Name _____ Signature _____
Date _____ Email address: _____

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE
ON 10 April 2013 FOR (3) YEARS, REFERENCE NUMBER 9067.

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Appendix C: Participant Information Sheet and Consent Form for Students in Phase One

PARTICIPANT INFORMATION SHEET

(Students of Phase One)

Project Title: Fostering Strategic Second-Language Writers: A Study of Chinese English-as-a-Foreign-Language (EFL) Writers' Self-Regulated Learning Strategies, Self-Efficacy and Motivational Beliefs

Researcher: Lin Teng

Researcher introduction

My name is Lin Teng, a PhD candidate at the School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland. I am conducting research on self-regulated learning (SRL) strategies in English as a Foreign Language (EFL) writing.

Project description and invitation

This project attempts to foster self-regulated EFL writers from the perspectives of their use of SRL strategies, motivational beliefs, self-efficacy and writing performance. This empirical study is composed of two phases. Phase One aims to document the current situation of Chinese EFL writers' use of SRL strategies, motivational beliefs and self-efficacy. Phase Two aims to implement and evaluate self-regulated strategies-based writing instruction.

You are cordially invited to join Phase One of my PhD research. I have contacted your faculty and gained the Dean's permission to ask your involvement.

Student involvement

Participants in Phase One (09/2013–01/2014) will be asked to:

- Complete three English questionnaires that focus on SRL strategies and perceived self-efficacy and motivational beliefs. This will take 20–30 minutes in total, and will be given to you in person at the beginning and again at the end of the research. It is hoped you can return it within one week. You are required to write a unique identification name, which can only be recognised by yourself. When completing, you are encouraged to address any questions to the researcher, and answers will be clearly explained;
- Complete a given-topic writing test (one hour) in class. The test is related to your life or learning. The result of this writing test is only for research purposes and is not related to your course or university performance.

Your participation or non-participation will not influence your relationship with the university or your English teacher.

Data storage/retention/destruction/future use

Hard copy data will be securely stored in a locked cabinet at the University of Auckland and electronic data will be stored on the researcher's computer, which is password protected. After six years, all hard copy data will be shredded and the digital information will be deleted. The data collected from the research will be used for the

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Te Kura Akoranga o Tāmaki Makaurau
Incorporating the Auckland College of Education

researcher's PhD thesis at the University of Auckland, and may be used for academic publications, and conference presentations. If you would like to have a copy of the research findings at the end, please indicate this on the consent form, and I will send a summary to you.

Right to withdraw from participation

Once involved, all the participants are entitled to withdraw themselves or any data provided by them at any time before 1st January, 2014 without having to give a reason. They have the right to not answer any specific questions and also to have the recorder turned off at any stage. The Dean will be required to give an assurance that participation or withdrawal will not affect the normal courses, grade, or relationship with the faculty.

Anonymity and confidentiality

Student participants will be asked to write a unique identification code, which can only be recognised by themselves. Each participant will be given a code with numbers ranging from 001 to 400 and a list will be maintained to link participants, via a unique identification name with the questionnaires and writing samples. This information will be kept separately from the data and will only be known to the researcher. The anonymity of non-participants in group situations will be preserved and students who decline to join may choose to return a blank questionnaire. Confidentiality is assured. Information regarding the university and the faculty will be disguised. If the information participants provide is reported/published, pseudonyms or their unique identification name will be used to protect their identity. No identifying information and data collected from the research will be disclosed to a third party.

Thank you for taking the time to read this information sheet. If you have any enquiries or questions, please do not hesitate to contact me or my supervisors.

Yours sincerely,

Lin Teng

Contact details

Researcher	Main supervisor	Co-supervisor
Lin Teng School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland Gate 3, 74 Epsom Ave, Auckland. lt372@aucklanduni.ac.nz Ph: +64 09 623 8899 ext. 48463 <u>Local contact in China</u> Ph: +86 15804621426	Professor Lawrence Jun Zhang Associate Dean International Strategic Engagement, School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland Gate 3, 74 Epsom Ave, Auckland. lj.zhang@auckland.ac.nz Ph: +64 9 6238899 ext: 48750	Associate Professor Martin East Associate Dean Research Development, School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland Gate 3, 74 Epsom Ave, Auckland. m.east@auckland.ac.nz Ph: +64 0 9 373 7599 ext. 48345

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For any queries regarding ethical concerns, you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland, 1142. Telephone: 09 3737599 ext. 83711.

**APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE
ON 10 APRIL 2013 FOR (3) YEARS, REFERENCE NUMBER 9067.**

CONSENT FORM

(Students of Phase One)

(THIS FORM WILL BE HELD FOR A PERIOD OF 6 YEARS)

Project title: Fostering Strategic Second-Language Writers: A Study of Chinese English-as-a-Foreign-Language (EFL) Writers' Self-Regulated Learning Strategies, Self-Efficacy and Motivational Beliefs

Researcher: Lin Teng

- I have read the Participant Information Sheet, and understood the nature of the research and why I have been invited to participate. I have had the opportunity to ask questions and have them answered satisfactorily.
- I agree to take part in this project.
- I understand that participation is voluntary.
- I understand that I will be asked to write a unique identification code, which can only be recognised by myself.
- I understand that I will be asked to complete the three questionnaires relating to my use of SRL strategies and perceived motivational beliefs and self-efficacy.
- I understand that it will take me approximately 20–30 minutes to complete the whole questionnaire.
- I agree to take part in a given-topic writing test in class (one hour).
- I understand that I have the right to withdraw myself or any data provided by myself at any time before 1st January, 2014 without explanation.
- I understand that the Dean has given the assurance that participation or withdrawal will not affect my grade or academic relationship with my faculty.
- I understand that hard copy and digital data will be stored separately and securely for a period of six years and then destroyed.
- I understand that the data collected from the research will be used for the researcher's PhD thesis at the University of Auckland, and may be used for academic publications, and conference presentations.
- I understand that a coding system will be used to track my data.
- I understand that information regarding the university and the faculty will be disguised.
- I understand that if the information I provide is reported/published, pseudonyms will be used to protect my identity.
- I understand that no identifying information will be disclosed to a third party or the public.

Name _____ Signature _____
Date _____ Email address: _____

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE
ON 10 APRIL 2013 FOR (3) YEARS, REFERENCE NUMBER 9067

Appendix D: Participant Information Sheet and Consent Form for Students in Phase Two

PARTICIPANT INFORMATION SHEET

(Students of Phase Two)

Project Title: Fostering Strategic Second-Language Writers: A Study of Chinese English-as-a-Foreign-Language (EFL) Writers' Self-Regulated Learning Strategies, Self-Efficacy and Motivational Beliefs

Researcher: Lin Teng

Researcher introduction

My name is Lin Teng, a PhD candidate at the School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland. I am conducting research on self-regulated learning (SRL) strategies in English as a Foreign Language (EFL) writing.

Project description and invitation

This project attempts to foster self-regulated EFL writers from the perspectives of their use of SRL strategies, motivational beliefs, self-efficacy and writing performance. This empirical study aims to implement and evaluate self-regulated strategies-based writing instruction.

You are cordially invited to join my PhD research. I have contacted your faculty, and gained the Dean's permission to ask your involvement.

Student involvement

Participation (09/2013–12/2013) will involve completing a 16-week writing intervention. Participants in the writing intervention will be randomly assigned into an experimental group and a control group. All the students from the two groups will be invited to complete:

- Given-topic writing tests (one hour for each). These students will be asked to complete three essays with assigned topics in class at the beginning, at the end of, and four weeks after the intervention. These essays are related to your life or learning. The results of these writing tests are only for research purposes and are not related to your course or university performance.
- Writing instruction, in which students of the experimental group will receive a 16-week instruction (one session per week of 1.5 hours per session). The control group will receive the regular writing courses required by the university curriculum.

In order to avoid potentially disadvantaging the participants of the control group, the researcher will provide the same writing intervention courses after the research project and all participants are welcome to join. The course material will be made available and the researcher will be ready to answer any questions and provide any help if participants need. If anyone does not take part in the intervention courses, it is assured that he/she will not be disadvantaged by this and also that there is no grade evaluation on the courses.

During the writing intervention, two students from the experimental group will be selected to take part in a follow-up case study. They will be invited to:

- Attend semi-structured interviews at the beginning and the end of the intervention. The interview will last approximately 20 minutes and will be audio-recorded. Students are free to not answer any questions they do not wish to answer, and to have the recorder switched off at any time. The audio will be transcribed by the researcher. Once the transcription is done, students will receive a copy of the transcript to check, and will be invited to make any amendments and/or delete any statements.
- Keep journals about changes relating to their use of SRL strategies, motivation and self-efficacy during the intervention. Copies of participants' journals will be collected during the research period subject to students' consent.

Your participation or non-participation will not influence your relationship with the university or your English teacher.

Data storage/retention/destruction/future use

Hard copy data will be securely stored in a locked cabinet at the University of Auckland and electronic data will be stored on the researcher's computer, which is password protected. After six years, all hard copy data will be shredded and the digital information will be deleted. The data collected from the research will be used for the researcher's PhD thesis at the University of Auckland, and may be used for academic publications, and conference presentations. If you would like to have a copy of the research findings at the end, please indicate this on the consent form, and I will send a summary to you.

Right to withdraw from participation

Once involved, all the participants are entitled to withdraw themselves or any data provided by them at any time before 1st January, 2014 without having to give a reason. They have the right to not answer any specific question and also to have the recorder turned off at any stage. The Dean will be required to give an assurance that participation or withdrawal will not affect the normal courses, grade, or relationship with the faculty.

Anonymity and confidentiality

Participants will be asked to write a pseudonym as part of this research project. This information will be kept separately from the data and will only be known to the researcher. Confidentiality will be assured. If the information participants provide is reported/published, pseudonyms will be used to protect their identity. Information regarding the university and the faculty will be disguised. No identifying information and data collected from the research will be disclosed to a third party.

Thank you for taking the time to read this information sheet. If you have any enquiries or questions, please do not hesitate to contact me or my supervisors.

Yours sincerely,

Lin Teng

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Contact details

Researcher	Main supervisor	Co-supervisor
Lin Teng School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland Gate 3, 74 Epsom Ave, Auckland. lten372@aucklanduni.ac.nz Ph: +64 09 623 8899 ext. 48463 <u>Local contact in China</u> Ph: +86 15804621426	Professor Lawrence Jun Zhang Associate Dean International Strategic Engagement, School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland Gate 3, 74 Epsom Ave, Auckland. lj.zhang@auckland.ac.nz Ph: +64 9 6238899 ext: 48750	Associate Professor Martin East Associate Dean Research Development, School of Curriculum and Pedagogy, Faculty of Education and Social Work, The University of Auckland Gate 3, 74 Epsom Ave, Auckland. m.east@auckland.ac.nz Ph: +64 0 9 373 7599 ext. 48345

You may also contact the head of the School of Curriculum and Pedagogy, Professor Judy Parr, by jm.parr@auckland.ac.nz or +64 09 623 8899 ext. 88998.

For any queries regarding ethical concerns, you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Office of the Vice Chancellor, Private Bag 92019, Auckland, 1142. Telephone: 09 3737599 ext. 83711.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 10 APRIL 2013 FOR (3) YEARS, REFERENCE NUMBER 9067.

CONSENT FORM

(Students of Phase Two)

(THIS FORM WILL BE HELD FOR A PERIOD OF 6 YEARS)

Project title: Fostering Strategic Second-Language Writers: A Study of Chinese English-as-a-Foreign-Language (EFL) Writers' Self-Regulated Learning Strategies, Self-Efficacy and Motivational Beliefs

Researcher: Lin Teng

- I have read the Participant Information Sheet, and understood the nature of the research and why I have been invited to participate. I have had the opportunity to ask questions and have them answered satisfactorily.
- I agree to take part in the four-month writing intervention.
- I understand that participation is voluntary.
- I understand that I will be asked to write a pseudonym on all items submitted as part of this research project.
- I understand that the time of the writing intervention is 16 weeks (one session with 1.5 hours per week).
- I understand that I will be randomly assigned to either the experimental group, which will have a 16-week writing instruction, or the control group, which will have the same period of the regular writing courses.
- I understand that the intervention course will be made available to the control group after the research project.
- I understand that if I miss the intervention courses or regular courses, I will not be disadvantaged by this.
- I understand that the same writing intervention courses after the research project will be provided and anyone is welcome to join.
- I understand that there is no grade evaluation on the writing intervention.
- **I agree/don't agree** to take part in the follow-up case study.
- I agree to take part in two 20-minute semi-structured interviews. I understand that the interviews will be at the beginning and the end of the terms and will be audio-recorded.
- I agree to keep journals during the intervention and give copies of my journals to the researcher.
- I understand that I will be asked to write a pseudonym on all items submitted as part of this research project.
- I understand that I have the right not to answer any specific questions in the interview.
- I understand that I am entitled to have the recorder turned off at any stage without explanation.
- I understand that I will be invited to check the transcription and have the right to make any amendments and/or delete any statements.
- I understand that the selection of participants in this research is random and there is no bias in the process.
- I understand that if I were not chosen for this research due to over-recruitment, I will receive a thank-you letter to explain it.
- I understand that I have the right to withdraw myself or any data provided by myself at any time before 1st January, 2014 without explanation.
- I understand that the Dean has given assurance that participation or withdrawal will not affect my grade or relationship with my faculty.

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Auckland 1150, New Zealand



- I understand that hard copy and digital data will be stored separately and securely for a period of six years and then destroyed.
- I understand that the data collected from the research will be used for the researcher's PhD thesis at the University of Auckland, and may be used for academic publications, and conference presentations.
- I understand that information regarding the university and the faculty will be disguised.
- I understand that if the information I provide is reported/published, pseudonyms will be used to protect my identity.
- I understand that no identifying information will be disclosed to a third party or the public.

Name _____ Signature _____
Date _____ Email address: _____

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS
COMMITTEE ON 10 APRIL 2013 FOR (3) YEARS, REFERENCE NUMBER 9067.

Appendix E: Developing Self-regulated Writer Survey

We would like to invite you to participate in a survey, conducted as a part of PhD project at the University of Auckland, New Zealand. This survey is designed to better understand your English writing in terms of your use of writing strategies, motivational beliefs and self-efficacy for fostering self-regulated writers. This is not a test so there are no right or wrong answers. We are only interested in your personal opinion. The result of this survey will be used for research purpose so your sincere answers to these questions ensure the success of this research project. Your cooperation is highly appreciated.

Part One

In this part, please provide the following information by ticking (✓) in the box or writing your response in the space so that we can interpret your answer better.

Code: _____ Gender: Male Female Age _____

University: _____ Major: _____ Grade: _____

Length of English learning: _____ year(s) since _____ (age)

English proficiency reflected by test: (You can choose more than one item)

CET4 CET6 TEM4 TEM8

BEC IELTS TOFEL Others (Please specify) _____.

Overseas experience: Have you ever been to English-speaking countries (e.g., studying, travelling, others)?

Yes No

If Yes, how long? _____

For what? Travel Study Other (Please specify) _____

What motivates you to learn English? (You can choose more than one answer)

Interest Job hunting Exam Study abroad Other (Please specify) _____

Part Two

Writing Strategies for Self-regulated Learning Questionnaire (WSSRLQ)

In this part, we would like you to help us by answering the following questions concerning your use of writing strategies. Please give your answers sincerely, as only this will guarantee the success of the investigation. Thank your very much for your help.

In the following section, we would like you to tell us how much you agree or disagree with the following statements by simply ticking (√) a number from 1 to 7. We are interested in your real situation and attitudes. Please do not leave out any of the items.

Not at all true of me	Not true of me	Slightly not true of me	Neutral	Slightly true of me	True of me	Very true of me
1	2	3	4	5	6	7

For example: I like English movies.	Not true of me at all							Very true of me						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
1. When writing, I use some literary devices to make the composition more interesting.								1	2	3	4	5	6	7
2. When revising, I check whether my composition meets the expectations of the prompt.								1	2	3	4	5	6	7
3. When revising, I check spelling and punctuation.								1	2	3	4	5	6	7
4. When revising, I check the structure for logical coherence.								1	2	3	4	5	6	7
5. When revising, I check the cohesiveness or connection among sentences.								1	2	3	4	5	6	7
6. When revising, I check whether the topic and the content have been clearly expressed.								1	2	3	4	5	6	7
7. I read related articles to help me plan.								1	2	3	4	5	6	7
8. I use the internet to search for related information to help me plan.								1	2	3	4	5	6	7
9. I frequently write useful words and expressions taught in writing courses to help me remember.								1	2	3	4	5	6	7
10. I speak out useful words and expressions taught in writing courses to help me remember them.								1	2	3	4	5	6	7
11. I read my class notes and the course material over and over again to help me remember them.								1	2	3	4	5	6	7
12. When I learn English writing, I set up goals for myself in order to direct my activities.								1	2	3	4	5	6	7
13. I make a plan to improve my writing.								1	2	3	4	5	6	7
14. In writing courses, I brainstorm with peers to help me write.								1	2	3	4	5	6	7
15. Before planning, I think about the core elements of a good composition I have learned.								1	2	3	4	5	6	7
16. I check my English learning progress to make sure I achieve my goal.								1	2	3	4	5	6	7
17. I evaluate my mastery of the content in writing courses.								1	2	3	4	5	6	7
18. I monitor my learning process in writing courses.								1	2	3	4	5	6	7
19. When I am writing, I tell myself to stick to my plan.								1	2	3	4	5	6	7
20. I discuss with my peers to have more ideas to write.								1	2	3	4	5	6	7

Not at all true of me	Not true of me	Slightly not true of me	Neutral	Slightly true of me	True of me	Very true of me
1	2	3	4	5	6	7
21. I work with other students in writing courses.					1	2 3 4 5 6 7
22. I am open to peers' feedback on my writing.					1	2 3 4 5 6 7
23. I am open to teachers' feedback on my writing.					1	2 3 4 5 6 7
24. I try to improve my English writing based on peers' feedback.					1	2 3 4 5 6 7
25. I try to improve my English writing based on teachers' feedback.					1	2 3 4 5 6 7
26. I look for ways to bring more fun to the learning of writing.					1	2 3 4 5 6 7
27. I choose interesting topics to practise writing with.					1	2 3 4 5 6 7
28. I connect the writing task with my real life to intrigue me.					1	2 3 4 5 6 7
29. I try to connect the writing task with my personal interest.					1	2 3 4 5 6 7
30. I remind myself about how important it is to get good grades in writing courses.					1	2 3 4 5 6 7
31. I tell myself that I need to keep studying to improve my writing competence.					1	2 3 4 5 6 7
32. I tell myself that it is important to practise writing.					1	2 3 4 5 6 7
33. I pay much attention to writing courses to learn more.					1	2 3 4 5 6 7
34. I tell myself to practise writing to get good grades.					1	2 3 4 5 6 7
35. I persuade myself to work hard in writing courses to improve my writing skills.					1	2 3 4 5 6 7
36. I persuade myself to keep on learning in writing courses to find out how much I can learn.					1	2 3 4 5 6 7
37. I tell myself that I should keep on learning.					1	2 3 4 5 6 7
38. I tell myself not to worry when taking a writing test or answering questions in writing courses.					1	2 3 4 5 6 7
39. I tell myself to keep on writing when I want to give it up.					1	2 3 4 5 6 7
40. I find ways to regulate my mood when I want to give up writing.					1	2 3 4 5 6 7

Great! You have completed Part Two.

Please continue completing the next part.

Part Three

Second-Language Writer Self-efficacy Scale (L2WSS)

In this part, we would like you to help us by answering the following questions concerning your writing self-efficacy. Please give your answers sincerely, as only this will guarantee the success of the investigation. Thank you very much for your help.

In the following section, we would like you to tell us how much you agree or disagree with the following statements by simply ticking (✓) a number from 1 to 7. We are interested in your real situation and attitudes. Please do not leave out any of the items.

Not at all true of me	Not true of me	Slightly not true of me	Neutral	Slightly true of me	True of me	Very true of me
1	2	3	4	5	6	7

For example: I like English movies.	Not true of me at all							Very true of me						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
1. I can spell all words correctly in writing.								1	2	3	4	5	6	7
2. I can correctly use all parts of speech (e.g., nouns, verbs, adjectives, etc.) in writing.								1	2	3	4	5	6	7
3. I can write a simple sentence with grammatical structure.								1	2	3	4	5	6	7
4. I can write compound and complex sentences with grammatical structure.								1	2	3	4	5	6	7
5. I can write a good paragraph with topic sentence or main idea.								1	2	3	4	5	6	7
6. I can write a composition with a clear organisation or structure.								1	2	3	4	5	6	7
7. I can realise my goal to improve my writing.								1	2	3	4	5	6	7
8. I can think of my goals before writing.								1	2	3	4	5	6	7
9. I can think of different ways to help me to plan before writing.								1	2	3	4	5	6	7
10. I can evaluate whether I achieve my goal in writing.								1	2	3	4	5	6	7
11. I can get an excellent grade in writing course.														
12. I can understand the most difficult material presented in the writing course.								1	2	3	4	5	6	7
13. I can understand the basic concepts taught in the writing course.								1	2	3	4	5	6	7
14. I can understand the most complex material presented by the instructor of the writing course.								1	2	3	4	5	6	7
15. I can do an excellent job on the assignments and tests in the writing course.								1	2	3	4	5	6	7
16. I can master the writing knowledge and strategies being taught in the writing course.								1	2	3	4	5	6	7
17. Considering the difficulty of the writing course, the teacher, and my skill, I think I can do well in this class.								1	2	3	4	5	6	7

Part Four

Writing Motivation

In this part, we would like you to help us by answering the following questions concerning your writing motivation. Please give your answers sincerely, as only this will guarantee the success of the investigation. Thank you very much for your help.

In the following section, we would like you to tell us how much you agree or disagree with the following statements by simply ticking (✓) a number from 1 to 7. We are interested in your real situation and attitudes. Please do not leave out any of the items.

Not at all true of me	Not true of me	Slightly not true of me	Neutral	Slightly true of me	True of me	Very true of me
1	2	3	4	5	6	7

For example: I like English movies.	Not true of me at all							Very true of me						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
1. I prefer writing course material that really challenges me so I can learn new things.								1	2	3	4	5	6	7
2. I prefer writing course material that arouses my curiosity, even if it is difficult to learn.								1	2	3	4	5	6	7
3. The most satisfying thing for me in the writing course is trying to understand the content as thoroughly as possible.								1	2	3	4	5	6	7
4. Getting a good grade in writing is satisfying for me.								1	2	3	4	5	6	7
5. Getting a good grade in writing is the most important thing for me.								1	2	3	4	5	6	7
6. If I can, I want to get better grades in writing than most of the other students.								1	2	3	4	5	6	7
7. I want to do well in English writing to show my ability to others, like teachers, peers, and family.								1	2	3	4	5	6	7
8. I think I will be able to use what I learn in the writing course in other English learning contexts.								1	2	3	4	5	6	7
9. It is important for me to learn the material related to English writing.								1	2	3	4	5	6	7
10. I am interested in the content area of the writing course.								1	2	3	4	5	6	7
11. I think the material of the writing course is useful for me to learn.								1	2	3	4	5	6	7
12. I like the writing knowledge and strategies taught in the writing course.								1	2	3	4	5	6	7
13. I think the writing knowledge and strategies are useful.								1	2	3	4	5	6	7
14. Understanding the writing knowledge and strategies is very important to me.								1	2	3	4	5	6	7
15. If I study in appropriate ways, then I will be able to make progress in writing.								1	2	3	4	5	6	7
16. It is my own fault if I don't perform well in the writing course.								1	2	3	4	5	6	7
17. If I try hard enough, then I will understand the writing course material.								1	2	3	4	5	6	7
18. If I try hard enough, I will make progress in writing.								1	2	3	4	5	6	7
19. When I take a test, I think about how poorly I am doing compared with other students.								1	2	3	4	5	6	7
20. When I am writing an English composition in a test, I think about items on other parts of the test I can't answer.								1	2	3	4	5	6	7
21. When I take a writing test I think of the consequences of failing.								1	2	3	4	5	6	7
22. I have an uneasy, upset feeling when I take a writing test.								1	2	3	4	5	6	7

Well done! You have completed the whole survey.

Thanks for your cooperation.

Appendix F: Writing Topic in Phase One

Prompts: Smoking is a major cause of serious illness and death throughout the world today. In the interest of public health, governments should ban cigarettes and other tobacco product. Do you agree or disagree?

Write a composition of more than 200 words on the following topic: *Should governments ban cigarettes and other tobacco product?*

Should governments ban cigarettes and other tobacco product?

Appendix G: Jacob et al.'s (1981) Scoring Profile

ESL COMPOSITION PROFILE			
STUDENT	DATE	TOPIC	
SCORE	LEVEL	CRITERIA	COMMENTS
CONTEI	30-27	EXCELLENT TO VERY GOOD: knowledgeable • substantive • thorough development of thesis • relevant to assigned topic	
	26-22	GOOD TO AVERAGE: some knowledge of subject • adequate range • limited development of thesis • mostly relevant to topic, but lacks detail	
	21-17	FAIR TO POOR: limited knowledge of subject • little substance • inadequate development of topic	
	16-13	VERY POOR: does not show knowledge of subject • non-substantive • not pertinent • OR not enough to evaluate	
ORGANIZATION	20-18	EXCELLENT TO VERY GOOD: fluent expression • ideas clearly stated/ supported • succinct • well-organized • logical sequencing • cohesive	
	17-14	GOOD TO AVERAGE: somewhat choppy • loosely organized but main ideas stand out • limited support • logical but incomplete sequencing	
	13-10	FAIR TO POOR: non-fluent • ideas confused or disconnected • lacks logical sequencing and development	
	9-7	VERY POOR: does not communicate • no organization • OR not enough to evaluate	
VOCABULARY	20-18	EXCELLENT TO VERY GOOD: sophisticated range • effective word/ idiom choice and usage • word form mastery • appropriate register	
	17-14	GOOD TO AVERAGE: adequate range • occasional errors of word/idiom form, choice, usage <i>but meaning not obscured</i>	
	13-10	FAIR TO POOR: limited range • frequent errors of word/idiom form, choice, usage • <i>meaning confused or obscured</i>	
	9-7	VERY POOR: essentially translation • little knowledge of English vocabulary, idioms, word form • OR not enough to evaluate	
LANGUAGE USE	25-22	EXCELLENT TO VERY GOOD: effective complex constructions • few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions	
	21-18	GOOD TO AVERAGE: effective but simple constructions • minor problems in complex constructions • several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions <i>but meaning seldom obscured</i>	
	17-11	FAIR TO POOR: major problems in simple/complex constructions • frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions • <i>meaning confused or obscured</i>	
	10-5	VERY POOR: virtually no mastery of sentence construction rules • dominated by errors • does not communicate • OR not enough to evaluate	
MECHANICS	5	EXCELLENT TO VERY GOOD: demonstrates mastery of conventions • few errors of spelling, punctuation, capitalization, paragraphing	
	4	GOOD TO AVERAGE: occasional errors of spelling, punctuation, capitalization, paragraphing <i>but meaning not obscured</i>	
	3	FAIR TO POOR: frequent errors of spelling, punctuation, capitalization, paragraphing • poor handwriting • <i>meaning confused or obscured</i>	
	2	VERY POOR: no mastery of conventions • dominated by errors of spelling, punctuation, capitalization, paragraphing • handwriting illegible • OR not enough to evaluate	
TOTAL SCORE	READER	COMMENTS	

Appendix I: Writing Topic at the Pre-Test in Phase Two

Prompts: It was recently reported in a newspaper that six students who shared a dorm at a local university hired a cleaner to do laundry and cleaning once a week. And each of them paid her 60 yuan a month. This has led to a heated debate as to whether college students should hire cleaners.

Write a composition of more than 200 words on the following topic: *Should College Students Hire Cleaners?*

Should College Students Hire Cleaners?

Appendix J: Writing Topic at the Post-Test in Phase Two

Prompts: Nowadays the Internet has become part of people's life, and millions of young people have made friends online.

Write a composition of more than 200 words on the following topic: *Is It Wise to Make Friends Online?*

Is It Wise to Make Friends Online?

Appendix K: Writing Topic at the Delayed Post-Test in Phase Two

Prompts: Many people are optimistic about 21st century and see it as an opportunity to make positive changes to the world.

Write a composition of more than 200 words on the following topic: *Is this world getting better?*

Is this world getting better?

Appendix L: Sample Lesson Plans for Self-regulated Strategies-based Writing Intervention

Lesson 1

Strategy objectives

Retrieval of background knowledge promotes planning and performance; strategy instruction provides guide and criteria for writing.

Activate previous knowledge and self-evaluation/self-assessment

Model of self-evaluating:

1. Self-questions is effective way to help [students] evaluating their own progress by graphic organiser.

- 1) I am ready to move to the next step?
- 2) Have I used all of my story parts?
- 3) Think back. Have I had any problems with this?
- 4) Do I need to do anything different?
- 5) Do I need to ask the teacher or a friend for help?

2. Ask students to share their reflections on writing intervention, teachers gain valuable insight into their progress and readiness for moving on by asking questions (interview) or journal (with guided questions on student journal)" the interview provides opportunity for in-depth probing, and elaboration and clarification of terms, if necessary" (Wiersma, 1995, p. 196)

3. Collaborative peer evaluation, such as peer-revising strategies (Graham, Harris, & Mason, 2005; Graham & Mason, 2006) is also valuable component of the assessment process

Content

This lesson aims to develop students' background knowledge of a persuasive essay, and introduce POW and TREE strategies. Firstly, students are required to discuss in a group (3-4 students) on the characteristics of a persuasive opinion essay and why it is important in writing. Then teacher introduces POW and TREE strategies for a persuasive essay. POW strategies here includes three parts: Pick my idea in persuasive writing refers to premise decision and attitudes and knowledge towards topic; Organise my notes means using a graphic organiser to map all their ideas about the chosen topic or perspective; writing and say more means modifying and upgrading ideas via collaboration with peers and teachers by proposing critical questions. Meanwhile, TREE strategies are used to facilitate the second step of POW, which helps the form of argument part. There are four strategies: Topic sentence: the premise of the paper; Reasons: supporting details for the premise; Ending: wrap it up right; Examine: check whether all TREE

strategies have been used and whether they are relevant to the premise. After that comes the modelling step, in which students are required to identify the POW and TREE strategies used in two essay samples and transition words facilitated by graphic organiser and how to support ideas enlightened from sample essays. During this period, teachers will challenge students or inspire them to think with the critical questions: Does it make sense? How many parts it has? Does the essay clearly explain the premise? How about the transition words? How can you make it better? How can you make your argument more persuasive?

Lesson 2

Strategy objectives

Goal setting improves “attention, motivation and effort. It also facilitates planning and strategic behaviour while promoting self-evaluation and self-determined consequences’ (Harris et al., 2008, p. 33)

Self-monitoring as a part of metacognitive self-regulation occurs in evaluating performance and the use of strategies. It is important to foster self-regulatory capability and arouse positive motivation and interest. It includes time and place arrangement, planning, seeking and organising information, revising, obtaining help (Graham & Harris, 1996, p. 349)

Content

Instructor and students review POW+TREE strategy and learn self-regulation strategies, including goal setting and self-monitoring. Along with their teacher, students’ current performance is examined by analysing their previously written essays. They are also encouraged to jot down goals for self-monitoring in the next step and arouse motivation in writing. Then, students, as a collaborative partner, identify strategies used and challenges (e.g., negative attitudes, ineffective self-talk or strategy use) in composing and self-monitoring processes with critical thinking. As a group, students are encouraged to discuss how to make samples or other written works better, say, How to present more than three reasons? Do I need to add the opposite opinion? Is the opening or ending interesting enough? How to make the essay more logical through transition words? When students propose these critical questions or get feedbacks from their peers, it is useful to fostering self-regulated capacity and critical thinking ability, which are two necessary elements of a successful writer. Then for strategy generalization or maintenance, instructor and students work collaboratively to identify the opportunities to use writing strategies and how to modify in other settings or tasks.

Appendix M: Student Self-revising Checklist

Content		Self-questions	Comment
Organisation, unity and coherence	Introduction	1. Does it have a clear thesis statement?	
		2. Is the thesis statement consistent with the following reasons?	
	Organisation & Coherence	3. Is it well organised with a smooth flow from one idea to the next?	
		4. Does it have a good structure with a clear introduction, body paragraphs, and conclusion?	
		5. Does it have transitions to link sentences or paragraphs together?	
	Conclusion	6. Did the writer restate/summarize the thesis using different words?	
		7. Is the conclusion drawn reasonably from the premise offered to support it?	
		8. Did the writer leave the reader with something to think about?	
Ideas and development	Topic	1. Is the topic fully addressed?	
		2. Is the topic sentence of each reason clearly expressed?	
		3. Do these reasons parallel?	
	Supporting detail	4. Is there enough evidence to support author's position?	
		5. Do author use different ways (e.g., details, examples) to support the position?	
	The opposing idea	6. Does the author demonstrate the opposing idea?	
		7. Does the author refute the opposing idea?	
Linguistics	Vocabulary	1. Does the essay have some words with wrong spelling?	
		2. Does it deploy good choices of words which are appropriate, specific and varied?	
		3. Can some words be replaced by advanced ones or more concrete and specific one?	
	Grammar and sentences	4. Are there any grammar errors?	
		5. Should I change the order of some sentences?	
		6. Does the essay include many kinds of sentences (various lengths and structures)?	

Notes:

Appendix N: Students' Interview Schemes at the Pre-test and the Post-test

Student interview schemes prior to the intervention

Theme One: Writing

1. Are you interested in English writing and what motivates you to write?
2. Are you confident in English writing?
3. Do you practise English writing in your spare time? If yes, how often?
4. Why do you think some students can write a good composition but others not?
5. Please describe your writing habit.

Theme Two: Writing course

1. Do you feel motivated in the writing course? If yes, please specify?
2. What can you get most of from the writing course?
3. And in which part do you want to improve the writing course?
4. Has your English teacher illustrated some writing techniques or strategies to you? If so, what are they? What do you think of these strategies?

Theme Three: SRL strategies

1. Have you heard of writing strategies/SRL strategies before?
 2. What strategies do you use pre-, during- and after the writing process?
 3. Do you plan before writing? What will you take into consideration when planning?
 4. What do you do to help your planning?
 5. Do you revise after writing and what do you focus on?
 6. What are the difficulties when revising?
 7. Can you self-evaluate your writing process and performance?
 8. How do you motivate yourself in the writing process?
-

Student interview schemes after the intervention

Theme One: Writing

1. Are there any changes in terms of your writing habits, writing motivation and confidence after the intervention?
2. Is there any change regarding your understanding of what makes a student write a good composition?

Theme Two: Writing course

1. How would you rate the usefulness of the writing course?
2. Do you feel motivated in the writing course?
3. Do you like your teacher's way of teaching writing? Why?
4. Do you have any other comments on improving the writing instruction?

Theme Three: Writing strategies/SRL strategies

1. Do you have a more concrete idea about writing strategies/SRL strategies after the writing intervention?
 2. What do you think about strategies taught in the writing course?
 3. Did the strategy help you write better? Why or why not?
 4. Will you continue to use these strategies? Why or why not?
 5. What do you think of feedback from teachers and peers?
-

Appendix O: Descriptive Statistics of the Writing Strategies for Self-regulated Learning Questionnaires (WSSRLQ) (45 items)

Items	M	SD	Skewness	Kurtosis
Item 1-When writing, I use different ways to present my topics (e.g., example, explanation)	4.91	1.35	-0.72	0.10
Item 2-When writing, I use some literary devices to make the composition more interesting.	3.39	1.58	0.29	-0.83
Item 3-When revising, I check for grammar mistakes.	5.05	1.59	-0.84	-0.01
Item 4-When revising, I check whether my composition meets the expectations of the prompt.	5.31	1.51	-0.97	0.41
Item 5-When revising, I check spelling and punctuation.	4.32	1.75	-0.28	-0.97
Item 6-When revising, I check the structure for logical coherence.	4.25	1.63	-0.28	-0.83
Item 7-When revising, I check the cohesiveness or connection among sentences.	4.68	1.53	-0.58	-0.45
Item 8-When revising, I check whether the topic and the content have been clearly expressed.	5.12	1.42	-0.86	0.21
Item 9-I read related articles to help me plan.	4.66	1.63	-0.58	-0.61
Item 10-I use the internet to search for related information to help me plan.	4.68	1.65	-0.60	-0.54
Item 11-I write useful words and expressions taught in writing courses to help me remember.	4.40	1.73	-0.28	-0.98
Item 12-I speak out useful words and expressions taught in writing courses to help me remember.	4.70	1.58	-0.54	-0.59
Item 13-I read my class notes and the course material over and over again to help me remember them.	4.31	1.54	-0.21	-0.85
Item 14-I make a list of important items in writing courses and memorize them.	4.51	1.63	-0.44	-0.73
Item 15-When I learn English writing, I set up goals for myself in order to direct my activities.	3.32	1.58	0.34	-0.67
Item 16-I make a plan to improve my writing.	3.48	1.57	0.30	-0.55
Item 17-When planning, I think about how my readers may feel.	3.78	1.70	0.09	-1.01
Item 18-In writing courses, I brainstorm with peers to help me write.	3.24	1.51	0.34	-0.83
Item 19-Before planning, I think about the core elements of a good composition learned.	4.50	1.54	-0.39	-0.66
Item 20-I check my English learning progress to make sure I achieve my goal.	3.76	1.52	0.01	-0.77
Item 21-I evaluate my mastery of the content in writing courses.	4.01	1.52	-0.06	-0.71
Item 22-I monitor my learning process in writing courses.	3.80	1.53	-0.02	-0.72
Item 23-When I am writing, I tell myself to stick to my plan.	4.16	1.61	-0.28	-0.70
Item 24-I discuss with my peers to have more ideas to write.	3.78	1.62	0.03	-1.01
Item 25-I work with other students in writing courses.	3.79	1.70	0.09	-0.93
Item 26-I am open to peers' feedback on my writing.	5.52	1.24	-1.12	1.41
Item 27-I am open to teachers' feedback on my writing.	5.87	1.09	-1.36	2.60
Item 28-I try to improve my English writing based on peers' feedback.	5.31	1.26	-0.95	1.06
Item 29-I try to improve my English writing based on teachers' feedback.	5.72	1.10	-1.21	2.17
Item 30-I look for ways to bring more fun to the learning of writing.	4.62	1.54	-0.49	-0.48
Item 31-I choose interesting topics to practise writing.	4.72	1.68	-0.56	-0.60
Item 32-I connect the writing task with my real life to intrigue me.	4.45	1.65	-0.32	-0.75
Item 33-I try to connect the writing task with my personal interest.	4.66	1.61	-0.51	-0.51
Item 34-I remind myself about how important it is to get good grades in writing courses.	4.88	1.59	-0.68	-0.30
Item 35-I tell myself that I need to keep studying to improve my writing competence.	4.78	1.49	-0.60	-0.27
Item 36-I tell myself that it is important to practise writing.	5.19	1.39	-0.86	0.28
Item 37-I pay much attention to writing courses to learn more.	4.94	1.40	-0.67	-0.14
Item 38-I tell myself to practise writing to get good grades.	4.90	1.48	-0.67	-0.26
Item 39-I persuade myself to work hard in writing courses to improve my writing skills.	4.97	1.39	-0.68	-0.13
Item 40-I persuade myself to keep on learning in writing courses to find out how much I can learn.	4.78	1.37	-0.54	-0.20
Item 41-I tell myself that I should keep on learning.	5.34	1.31	-0.86	0.37
Item 42-I tell myself writing is not difficult as a way of self-encouragement.	4.58	1.53	-0.44	-0.50
Item 43-I tell myself not to worry when taking a writing test or answering questions in writing courses.	5.15	1.43	-0.85	0.36
Item 44-I tell myself to keep on writing when I want to give it up.	5.04	1.37	-0.71	0.25
Item 45-I find ways to regulate my mood when I want to give up writing.	5.33	1.20	-0.82	0.98

Appendix P: The Finalised Writing Strategies for Self-regulated Learning Questionnaires (WSSRLQ) (40 items)

Items	<i>M</i>	<i>SD</i>
Item 2-When writing, I use some literary devices to make the composition more interesting.	3.39	1.58
Item 4-When revising, I check whether my composition meets the expectations of the prompt.	5.31	1.51
Item 5-When revising, I check spelling and punctuation.	4.32	1.75
Item 6-When revising, I check the structure for logical coherence.	4.25	1.63
Item 7-When revising, I check the cohesiveness or connection among sentences.	4.68	1.53
Item 8-When revising, I check whether the topic and the content have been clearly expressed.	5.12	1.42
Item 9-I read related articles to help me plan.	4.66	1.63
Item 10-I use the internet to search for related information to help me plan.	4.68	1.65
Item 11-I write useful words and expressions taught in writing courses to help me remember.	4.40	1.73
Item 12-I speak out useful words and expressions taught in writing courses to help me remember.	4.70	1.58
Item 13-I read my class notes and the course material over and over again to help me remember them.	4.31	1.54
Item 15-When I learn English writing, I set up goals for myself in order to direct my activities.	3.32	1.58
Item 16-I make a plan to improve my writing.	3.48	1.57
Item 18-In writing courses, I brainstorm with peers to help me write.	3.24	1.51
Item 19-Before planning, I think about the core elements of a good composition learned.	4.50	1.54
Item 20-I check my English learning progress to make sure I achieve my goal.	3.76	1.52
Item 21-I evaluate my mastery of the content in writing courses.	4.01	1.52
Item 22-I monitor my learning process in writing courses.	3.80	1.53
Item 23-When I am writing, I tell myself to stick to my plan.	4.16	1.61
Item 24-I discuss with my peers to have more ideas to write.	3.78	1.62
Item 25-I work with other students in writing courses.	3.79	1.70
Item 26-I am open to peers' feedback on my writing.	5.52	1.24
Item 27-I am open to teachers' feedback on my writing.	5.87	1.09
Item 28-I try to improve my English writing based on peers' feedback.	5.31	1.26
Item 29-I try to improve my English writing based on teachers' feedback.	5.72	1.10
Item 30-I look for ways to bring more fun to the learning of writing.	4.62	1.54
Item 31-I choose interesting topics to practise writing.	4.72	1.68
Item 32-I connect the writing task with my real life to intrigue me.	4.45	1.65
Item 33-I try to connect the writing task with my personal interest.	4.66	1.61
Item 34-I remind myself about how important it is to get good grades in writing courses.	4.88	1.59
Item 35-I tell myself that I need to keep studying to improve my writing competence.	4.78	1.49
Item 36-I tell myself that it is important to practise writing.	5.19	1.39
Item 37-I pay much attention to writing courses to learn more.	4.94	1.40
Item 38-I tell myself to practise writing to get good grades.	4.90	1.48
Item 39-I persuade myself to work hard in writing courses to improve my writing skills.	4.97	1.39
Item 40-I persuade myself to keep on learning in writing courses to find out how much I can learn.	4.78	1.37
Item 41-I tell myself that I should keep on learning.	5.34	1.31
Item 43-I tell myself not to worry when taking a writing test or answering questions in writing courses.	5.15	1.43
Item 44-I tell myself to keep on writing when I want to give it up.	5.04	1.37
Item 45-I find ways to regulate my mood when I want to give up writing.	5.33	1.20

Appendix Q Descriptive Analysis of the L2 Writer Self-efficacy Scale (L2WSS) (20 items)

Items	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>
Item 1-I can spell all words correctly in writing.	4.925	1.295	-.519	-.149
Item 2-I can correctly use all parts of speech (e.g., nouns, verbs, adjectives, etc.) in writing.	4.849	1.323	-.507	-.239
Item 3-I can write a simple sentence with grammatical structure.	5.530	1.191	-1.056	1.227
Item 4-I can write compound and complex sentences with grammatical structure.	4.661	1.394	-.374	-.367
Item 5-I can write a good paragraph with topic sentence or main idea.	4.565	1.263	-.292	-.081
Item 6-I can write a composition with a clear organisation or structure.	4.809	1.204	-.411	-.060
Item 7-I can realise my goal to improve my writing.	4.323	1.341	-.322	-.316
Item 8-I can think of my goals before writing.	3.973	1.463	.026	-.768
Item 9-I can think of different ways to help me to plan before writing.	4.530	1.467	-.473	-.484
Item 10-I can evaluate whether I achieve my goal in writing.	4.142	1.442	-.164	-.715
Item 11-I can evaluate my strength and weakness in English writing.	4.938	1.313	-.747	.375
Item 12-I can evaluate whether a composition is good or bad.	4.734	1.398	-.714	.180
Item 13-I believe I will receive an excellent grade in writing course.	5.242	1.244	-.763	.371
Item 14-I'm certain I can understand the most difficult material presented in writing course.	4.645	1.292	-.259	-.232
Item 15-I'm confident I can understand the basic concepts taught in writing course.	4.696	1.353	-.302	-.373
Item 16-I am confident I can understand the most complex material presented by the instructor of the writing course.	4.417	1.443	-.241	-.325
Item 17-I'm confident I can do an excellent job on the assignments and tests in the writing course.	4.763	1.402	-.482	-.341
Item 18-I expect to do well in the writing course.	5.484	1.325	-1.067	1.132
Item 19-I'm certain I can master the writing knowledge and strategies being taught in the writing course.	4.645	1.325	-.417	-.012
Item 20-Considering the difficulty of the writing course, the teacher, and my skill, I think I will do well in this class.	4.691	1.377	-.546	.053

Appendix R: The Finalised L2 Writer Self-efficacy Scale (L2WSS) (17 items)

Items	<i>M</i>	<i>SD</i>
Item 1-I can spell all words correctly in writing.	4.925	1.295
Item 2-I can correctly use all parts of speech (e.g., nouns, verbs, adjectives, etc.) in writing.	4.849	1.323
Item 3-I can write a simple sentence with grammatical structure.	5.530	1.191
Item 4-I can write compound and complex sentences with grammatical structure.	4.661	1.394
Item 5-I can write a good paragraph with topic sentence or main idea.	4.565	1.263
Item 6-I can write a composition with a clear organisation or structure.	4.809	1.204
Item 7-I can realise my goal to improve my writing.	4.323	1.341
Item 8-I can think of my goals before writing.	3.973	1.463
Item 9-I can think of different ways to help me to plan before writing.	4.530	1.467
Item 10-I can evaluate whether I achieve my goal in writing.	4.142	1.442
Item 13-I can receive an excellent grade in writing course.	5.242	1.244
Item 14- I can understand the most difficult material presented in writing course.	4.645	1.292
Item 15- I can understand the basic concepts taught in writing course.	4.696	1.353
Item 16- I can understand the most complex material presented by the instructor of the writing course.	4.417	1.443
Item 17- can do an excellent job on the assignments and tests in the writing course.	4.763	1.402
Item 19-I' m certain I can master the writing knowledge and strategies being taught in the writing course.	4.645	1.325
Item 20-Considering the difficulty of the writing course, the teacher, and my skill, I think I can do well in this class.	4.691	1.377

Appendix S: Descriptive Analysis of the Finalised Writing Motivational Belief Questionnaire (22 items)

Items	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Item 1-I prefer writing course material that really challenges me so I can learn new things.	4.369	1.622	-.237	-.783
Item 2-I prefer writing course material that arouses my curiosity, even if it is difficult to learn.	4.913	1.491	-.659	-.252
Item 3-The most satisfying thing for me in writing course is trying to understand the content as thoroughly as possible.	5.195	1.314	-.918	.614
Item 4-Getting a good grade in writing is satisfying for me.	5.567	1.300	-.933	.453
Item 5-Getting a good grade in writing is the most important thing for me.	5.085	1.536	-.767	-.078
Item 6-If I can, I want to get better grades in writing than most of other students.	5.518	1.446	-1.056	.591
Item 7-I want to do well in English writing to show my ability to others, like teachers, peers, and family.	4.785	1.618	-.570	-.481
Item 8-I think I will be able to use what I learn in writing courses to other English learning context.	5.423	1.249	-1.040	1.281
Item 9-It is important for me to learn the material related to English writing.	5.287	1.322	-.829	.598
Item 10-I am interested in the content area of writing course.	4.456	1.498	-.414	-.428
Item 11-I think the material of writing course is useful for me to learn.	5.026	1.362	-.685	-.005
Item 12-I like the writing knowledge and strategies taught in writing course.	5.010	1.454	-.745	.004
Item 13-I think the writing knowledge and strategies are useful.	5.215	1.316	-.919	.695
Item 14-Understanding the writing knowledge and strategies is very important to me.	5.282	1.268	-.893	.639
Item 15-If I study in appropriate ways, then I will be able to make progress in writing.	5.585	1.135	-.938	1.321
Item 17-If I try hard enough, then I will understand the writing course material.	5.308	1.259	-.581	-.246
Item 18-If I try hard enough, I will make progress in writing.	5.441	1.363	-1.061	.856
Item 19-When I take a test, I think about how poorly I am doing compared with other students.	3.264	1.845	.314	-1.056
Item 20-When I am writing an English composition in a test, I think about items on other parts of the test I can't answer.	3.308	1.813	.235	-1.133
Item 21-When I take a writing test I think of the consequences of failing.	3.351	1.883	.371	-1.041
Item 22-I have an uneasy, upset feeling when I take a writing test.	3.331	1.780	.295	-1.040

Appendix T: Descriptive Results of SRL Strategies by Year Levels

Dimensions	SRL Sub-Strategies	Year Level	<i>M</i>	<i>SD</i>
Cognitive Strategies	Text Processing	Year 1	4.414	1.041
		Year 2	4.671	1.014
		Year 3	4.350	1.218
		Year 4	4.721	1.052
	Knowledge Rehearsal	Year 1	4.793	1.177
		Year 2	4.380	1.269
		Year 3	4.181	1.460
		Year 4	4.273	1.313
Metacognitive Strategies	Idea Planning	Year 1	4.490	1.197
		Year 2	4.551	1.227
		Year 3	4.785	1.193
		Year 4	4.782	1.185
	Goal-oriented Monitoring	Year 1	3.776	1.173
		Year 2	3.821	1.152
		Year 3	3.383	1.102
		Year 4	4.185	1.244
Social Behavioural Strategies	Peer Learning	Year 1	3.462	1.314
		Year 2	3.710	1.371
		Year 3	3.311	1.386
		Year 4	4.242	1.173
	Feedback Handling	Year 1	5.621	0.852
		Year 2	5.713	0.872
		Year 3	5.683	0.865
		Year 4	5.227	1.142
Motivational Regulation Strategies	Interest Enhancement	Year 1	4.752	1.212
		Year 2	4.790	1.246
		Year 3	4.131	1.481
		Year 4	4.686	1.377
	Motivational Self-talk	Year 1	5.210	0.946
		Year 2	5.179	0.923
		Year 3	4.530	1.083
		Year 4	4.774	1.161
Emotional Control	Year 1	5.273	1.001	
	Year 2	5.346	1.006	
	Year 3	5.085	1.205	
	Year 4	4.745	1.042	

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