Cognitive Modelling: A Case Study of Reading-to-Write Strategy Instruction and the Development of Second Language Writing Expertise in a University English for Academic Purposes Writing Course

Margaret Heeney

A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Department of Curriculum Teaching and Learning
Ontario Institute for Studies in Education of the University of Toronto

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Margaret Heeney
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Abstract

This case study investigates how the teaching of cognitive strategies in an English for Academic Purposes (EAP) writing course at a Canadian university occurs and relates to students’ engagement in course writing tasks. While universities offer writing courses in order to improve academic writing skills, English Language Learners (ELL) may still be considered poor writers by mainstream standards. Perhaps the problem is not writing skill, but an ineffective linking of reading and writing strategic knowledge to the task at hand. Pedagogically interconnecting reading and writing skills reciprocally supports learner proficiency development, which may be enhanced by directly teaching awareness raising strategies.

This doctoral study seeks to investigate the declarative, procedural and conditional knowledge of what a teacher actually does in the classroom. This instrumental qualitative case study took place in a 10-week EAP writing course. Data collection involved classroom observation, open-ended interviews, reflective questionnaires and retrospective think-aloud tasks of 6 focal students. Analysis of the classroom observations, stimulated recalls, interviews and end-of-term questionnaires were thematically analysed for links between observed teaching activities and student perceived awareness of learning.
Taxonomies of teaching activities and learning activities incorporated five aspects of reading and writing behaviours. Teaching episodes are being analysed in one of three ways: Episodes of Raising Awareness (ERA), where teachers may only raise cognitive awareness by mentioning strategies for learning; Episodes of Strategy Explanation (ESE), where teachers explain and demonstrate the strategy; and Episodes of Cognitive Modelling (ECM), which entails the teacher verbalising by thinking aloud and demonstrating strategies as the expert. Student stimulated recalls were analysed as Episodes of Cognitive Learning (ECL). Analyses of the observations and the stimulated student recalls reveal results that link explicit teacher task modelling (ESEs and ECMs) by using think-alouds and demonstration to learner task awareness and strategy implementation. This study provides insights for researchers and educators across disciplines on the importance of the relationship between actively teaching cognitive strategies and how learners problem-solve or apply learning.
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More than anything, I have to thank my family. My mother and my sons, Simon and Andy, always believed I would be Dr. Mom. During this nine year journey, my sons married wonderful women: I now have four grandsons. Then, there is my husband, Ron. The journey became complex with his cancer and ensuing surgery. I believed that I would never complete this work. However, as I saw his positivity to heal, I knew that I too needed to be positive about my dissertation. Over the years, Ron sacrificed time we spend together, endured my late nights at the computer, and made me gallons of tea and coffee. His love and support has not faltered. Our four cats devoted many hours, purring, curled up behind me on the chair or by my computer late at night. Finally, I dedicate my thesis to my godmother and namesake, Peggy. She was a woman ahead of her time having a career working in the Middle East in the early 1950’s. She always encouraged me and was proud of my starting this doctoral journey, but unfortunately she passed two years ago aged 89. For Peggy.
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CHAPTER 1
INTRODUCTION

This thesis is an instrumental case study that investigates how teaching occurred in a post-secondary English for Academic Purposes (EAP) reading-to-write class and how students applied the teaching to their learning. This observational study focuses on how the teacher implemented cognitive strategy instruction and then how students employed these strategies during writing tasks. My review of publications involving longitudinal observational studies of strategy instruction and learning revealed a dearth of such studies conducted in second language (L2) literacy classrooms. However, Pressley et al. (2001) carried out a series of observational studies that detailed how comprehension instruction occurred in L1 elementary classrooms dedicated to strategy instructional. Pressley and colleagues’ work was the impetus behind the present thesis research, and which my case study has attempted to emulate.

Pressley and colleagues’ observational studies were conducted in response to debates about the best methods for teaching beginning reading: a skills-based approach (phonetic, phonemic awareness, word recognition) or whole language instruction (extensive reading, literature-based reading and writing activities, drawing inferences). Pressley et al. found that the teachers in their study had a balanced approach to beginning literacy: a middle ground that reconciled the two approaches. Ten first grade teachers were observed from a few months to a year. Five of the teachers had been nominated by their school boards as exemplary teachers, while the other five were considered more typical teachers. After observations, the teachers were interviewed. The observations informed the interview questions so that they were tailored to what the researchers had seen. The researchers asked questions such as: “When you were conducting a reading group, it seemed as though you were doing some on-line assessment of the kids. What were you doing?” (p. 52). Through their field notes of all 10 teachers, the
researchers were able to “identify comprehensively the elements of instruction for the teachers, in the end constructing a portrait of each teacher’s teaching” (p. 63).

Their observations created a model of how the teachers actually taught, and the researchers were able to produce a detailed summary of how strategy training actually happened in the classes. They documented how teachers gave instructions, monitored feedback, and scaffolded students’ learning. The study also looked for indicators of literacy achievement and found levels of achievement differed from one class to another. Overall, they found that in the better achieving classes “teachers integrated skills instruction with holistic activities” (p.55), which included short spontaneous lessons whenever students had a problem as the teacher would deviate from the lesson and model how to solve the problem.

Pressley et al. noted that teaching was deliberately scaffolded, and the 5 exemplary teachers had heightened awareness of tasks: “Scaffolding required that the teacher monitor students carefully and consistently. It also required that the teacher completely understood the tasks the students were attempting” (p.57) so that students were explicitly taught strategies appropriate to the lesson. Importantly, the researchers determined that “teaching was opportunistic [researchers’ emphasis] and driven by the needs of the students” (p.64). Furthermore, when students in the high achieving classes self-regulated or monitored their learning, teachers often noted their self-regulation and reinforced it by pointing out that mistakes were a positive means of learning through self-correction.

Not only is Pressley’s study important to the present case study in being a longitudinal study of exemplary strategic teaching, but I was also inspired by its analyses of the integration of reading and writing through the teaching of discrete language skills (e.g., learning ‘-ing’ endings) and of whole language skills (e.g., drawing on background knowledge). Their study’s main conclusions were that in teaching “experience matters” (p.220). Teachers learn from their students’ needs, successes and failures, and they change approaches accordingly and, thereby,
build expertise. Furthermore, expert teachers learn to use textbook materials as a departure point for teaching by supplementing and teaching mini lessons as the need arises. They learn to inspire students to self-regulate and to be self-reliant and make strategic choices for problem-solving. Expert teachers focus on what students need to know and understand what they already know so that students can remain engaged in lessons. Although Pressley’s study took place in L1 classrooms, I believe that Pressley’s conclusions about strategic teaching can be applied to L2 classrooms. With this aim in mind, I sought to determine if Pressley’s conclusions about how teaching literacy strategies occurs also appear in a university-level reading and writing class for English Language Learners (ELLs) in Canada.

A related, important issue that informs the present thesis study is the integration of reading and writing in L2 academic literacy classrooms. Hirvela (2004) posited that it is impossible to be a skilled writer without being a skilled reader. He noted that both reading and writing are processes whereby the learner constructs meaning from and with texts. Similar to Pressley et al. (2001), Hirvela (2004) also called for teachers to be opportunistic and to teach reading as writing and vice versa. He stated “we construct the L2 classroom as a place where literacy, not strictly writing skill, is the real focus of the course; where we believe that to learn about writing without learning about reading – and how reading contributes to writing – is to deprive our students of a true composing experience that is at the heart of writing” (p.40). According to Hirvela, teachers should actively scaffold learning by teaching strategies that integrate reading and writing.

Strategy instruction can raise learners’ cognitive awareness of how to do tasks. Using strategies involves planning to use specific knowledge and then assessing the success of the knowledge applied during or upon completion of a task. Many scholars agree that teaching strategies that raise learners' cognitive awareness are connected to student success. (Chamot et al, 1999; Hirvela, 2004; Oxford, 2001, Pressley et al., 2001, Wenden, 1991, Zhang 2008).
Research Questions

This study seeks to explore strategy instruction within an integrated reading and writing context and its relation to how university students enrolled in an (EAP) writing course perceive the impact of strategy instruction on their writing development. Furthermore, this research study attempts to provide some insights into students’ and teachers’ perceptions of how reading and writing strategy instruction relates to writing performance.

Main question:
How do cognitive strategies in an EAP reading-to-write course at a Canadian university occur and then relate to perceptions of students' performance in writing tasks for the course?

Sub-questions:

a) How are reading-to-write cognitive strategies taught in the one EAP reading-to-write course?

b) In what ways does the teacher perceive teaching reading-to-write cognitive strategies as linking to students’ writing improvement?

c) How do students use reading-to-write cognitive strategies during their composing processes when engaged in a series of comparable writing tasks over the duration of the course?

d) In what ways do the students perceive reading-to-write cognitive strategies as being helpful when engaged in these tasks?

To answer these questions, I opted for a qualitative case study design to provide contextualised data to understand the complex links between the processes involved in reading and writing in an additional language. I analysed various sources of data collected from the instructor and 6 focal students (described in Chapter 3). Findings from this study 1) add to our understanding of strategies of teaching integrated reading and writing and 2) contribute to our knowledge on how learners think and problem solve when engaged in writing tasks. The study
aims to give teachers insights into instructional methods that help develop strong academic literacy skills in learners.

**Rationale for the Study**

My interest in strategies and the relationship between teaching and learning in a reading and writing classroom stems from the challenges that I perceived confronted L2 university undergraduates. For years, I have been an EAP instructor in both pre-university and university level writing courses. My students have struggled with reading a quantity of texts, have felt challenged by a lack of vocabulary, and have found their efforts to synthesise texts into research essays has resulted in unintentional plagiarism. For a number of years, I taught at the pre-university level, where reading and writing were separate courses and instructors were not necessarily assigned to the same students. I felt this to be ineffective and wondered why relevant skills were not being taught in one integrated course with one instructor. I have always believed that reading and writing employ a complementary set of strategies, which need to be taught and practiced together.

As I progressed in my ESL career, I became involved in ESL teacher education, and observed not only teachers-in-training but also expert teachers in reading and writing classrooms. I observed teachers who conducted lessons that were very student-centred, focusing on strategies, which seemed to engage students in their learning. Conversely, I also observed teachers whose lessons were teacher-centred with less interaction, and the level of student engagement was low. This prompted me to speculate how strategies are taught most effectively and how their teaching might affect or influence students’ learning.

Another impetus for this research derived from my Master’s research (Heeney, 2005) where I developed an instructional activity that focused on reading strategies. Collaborative Awareness Reading Training (CART) is a strategy approach based on Palincsar and Brown’s
Reciprocal Teaching Approach (RTA) and rooted in Vygotsky’s (1978) zone of proximal development (ZPD), which is described as the area of potential development just beyond the learners’ abilities to successfully complete a task alone. First, in the RTA the teacher introduces the students to each strategy, explains it and gives a rationale why it is important, and then gradually scaffolds by first doing the strategy with a student, and then having students practice with peers. Once the scaffold is removed, the learner may be able to do the task alone. In Heeney (2005), I implemented 6 weeks of intensive strategy training in a class of 12 intermediate EAP students in a four-step process of four collaborative cognitive reading strategies: questioning, summarizing, clarifying, and predicting. Results revealed a shift in learners’ attitudes as they reported feeling more confident about reading and were also more aware of strategy use to address comprehension problems. As the teacher, I perceived the training as a positive experience that allowed for scaffolded learning. The 2005 study was conducted in my own classroom, so I could analyse perceptions of the strategy training; however, I was unable to objectively assess how I implemented this approach even though I had taught the strategies. For this reason, I thought the present observational case study would help to answer the question of how such strategy-oriented teaching occurs.

Furthermore, while CART focused on developing students’ awareness and use of reading strategies, the research did not focus on the relationship between reading and writing. While conducting the earlier study, I was fortunate to be teaching academic writing to the same group of students. In the writing class, I observed strategy use that led me to wonder whether students were transferring strategies from the direct reading strategy training to their research paper composing practices. For example, I noticed students began to include richer vocabulary in their writing, and their composition of summaries improved with well-paraphrased vocabulary. These observations piqued my interest in investigating the effective use of reading and writing
strategic knowledge not only from the perspective of teaching, but also from the perspective of learning.

**Organization of the thesis**

This thesis is organized into seven chapters. In Chapter 2, I review related research that involved classroom observation studies, academic literacy and the integration of reading and writing in the classroom, the role of cognition in teaching and learning, and its relations to reading and writing theory, and instructional studies of strategy training in reading and in writing. In Chapter 3, I describe my research methods, participants, and the conceptual framework of a taxonomy for strategy training, which was used for data analysis procedures. Chapter 4 presents an overview of the context in which the research was conducted. The chapter presents an in-depth look at the course, the teacher, the classroom, the students, as well as profiles of the focal students. In Chapter 5, to document the teaching that occurred in the course, I present descriptive data supported by some descriptive statistics. I also present the results of the teacher’s semi-structured midterm and final interviews. Each of the sections in Chapter 5 concludes by relating the data presented to previous, relevant published studies. To understand how participating students applied cognition in their learning, Chapter 6 presents findings from surveys, semi-structured interviews and focal student data, and briefly relates the data presented to previous research. Chapter 7 is an analysis and discussion of the findings related to previous research, focusing on the connections between cognitive strategies in teaching and learning in this academic literacy class. Based on this discussion, the theoretical framework is revisited. Finally, a summary of the findings, the limitations, and the implications of this study are discussed.
CHAPTER 2

REVIEW OF RELEVANT RESEARCH

In this chapter, I review relevant literature in order to establish foundations for the frameworks guiding this study. First, I provide an overview of empirical studies of observations of teaching in classrooms, establishing the importance of cognitive modelling. After that, I explore the concept of academic literacy within university contexts in order to provide further background for the study. Subsequently, I consider cognition and metacognition from a brief historical perspective, as well as a contemporary perspective, which informs concepts that define the scope and key focus of this study. Then, I consider frameworks for the role of cognitive strategies both in reading and in writing. The chapter concludes with empirical studies of strategy training in reading and writing classrooms.

What Strategy-oriented Teachers Do

This section reviews classroom observation studies of how teaching occurs, what teachers say, in other words, their meta-talk, in literacy classrooms in both L1 and L2 contexts.

As described in Chapter 1, Pressley’s et al. (2001) study investigated what exemplary teachers actually do in the classroom. The researchers found commonalities in the ways that the exemplary teachers carried out lessons, many of which can be applied to all teaching contexts regardless of the students’ ages, the language of instruction or learning. Pressley et al. sought classrooms that actively incorporated reading with writing, focusing not only on skill instruction but also on whole language learning. Early in their research, Pressley et al. surveyed teachers who believed themselves to be “extremely eclectic in their literacy instruction” (p.37) and incorporated skill instruction into a theme or context rather than teaching skills in isolation. Teachers reported that they needed to create risk-free environments that encouraged reading and
writing, to explain the importance of the lesson, to have students set goals for improvement and
to offer positive feedback to students. Later, when Pressley et al. conducted the classroom
observational studies, they found the results reflected their earlier observations. They found that
none of the classes were conducted similarly having different balances of instruction, but the
commonality was the teachers’ use of meta-language to enlighten students of strategic task
awareness. They stated, “The excellent teacher persuades and informs rather than issues teacher-
to-student directives” (p.232).

Many empirical studies have determined that students benefit from explicit strategy
instruction in language classrooms (Cohen; 1998; Lam, 2009, O’Malley et al, 1985; Rossiter,
2003). In reading and writing classrooms, specific strategy training raises students’ awareness of
Wigglesworth & Storch, 2012). These studies concur that the role of the teacher and how
strategies are taught in literacy classrooms often determine the outcomes of the classroom
instruction.

However, many instructional studies examine the effects of teaching on learners rather
than considering how the teacher actually instructs. For example, Wei, Chen and Aduwu (2014)
employed writing strategy training using computer software with two students. The researchers
conducted the training themselves and concluded that for it to be successful, teachers should first
be trained in the purpose and use of strategies. They need to be aware of how to apply them,
assess learners’ use of them, and ultimately to evaluate the success of the strategies employed.
As Pressley et al. (2001) pointed out both teaching expertise and teaching strategy
implementation are learned. Through time spent in classrooms, expert teachers learn to focus on
what students need to know and understand what they already know so that teaching becomes
purposeful.
Pedagogical awareness of strategy training

There are also numerous studies that examine teachers' awareness of strategic teaching and its implementation. These studies are the focus of this section. In their study, Wilson and Bai (2010) investigated teachers' understanding of their own cognitive processes as they implement strategies and their pedagogical understanding of strategy training. The researchers claimed that strategic teachers are generally very aware of themselves and their thinking processes in that they are able to think out loud and talk about their own thought processes. Teachers need to understand that the goal of strategy instruction is to raise students’ awareness of the strategies and to help students develop control of their cognitive processes. Pressley (2002) believed that it is necessary for students to see the strategies being performed and, subsequently, require guided practice in them. Furthermore, students should realise that strategy use is flexible and changes according to the demand of the task. Wilson and Bai (2010) observed that the learning environment has to be conducive to students explicitly applying the strategies so that not only students but also teachers can assess their success. Importantly, teachers need to allow time to both teach the strategies and to give learners practice applying them.

After a robust review of teaching and learning literature, Wilson and Bai (2010) found that an assessment instrument to gauge teachers’ awareness of strategic knowledge had not yet been developed. Accordingly, they sought to develop a way to assess teachers' perceptions of their strategic knowledge. Teachers responded to questions regarding their pedagogical knowledge of the impact of strategy training and their beliefs regarding the encouragement that learners gain from direct strategy training. The researchers determined that teachers require declarative knowledge (what to teach), procedural knowledge (how to teach) and conditional knowledge (context dependent, being flexible in strategy choice) (Flavell, 1981).
Wilson and Bai (2010) subsequently investigated 105 K-12 teachers, 50% of whom were ESL teachers. The researchers created an assessment tool entitled *The Teachers’ Metacognitive Scale* (TMS), which included Likert-Scale and open-ended questions in order to assess teacher understanding of metacognitive strategies and their teaching activities. The survey included questions for participants to evaluate students’ awareness of strategies by rating the level of thinking if students described learning during classroom activities. The participants reported that being self-aware and teaching with awareness are processes of engagement. Teachers perceived that sharing their thinking processes of strategic knowledge with their students was helpful to students’ learning about how they apply strategies to learning. The authors pointed out that the instrument only measured declarative knowledge but not procedural knowledge and conditional knowledge, as there was neither measurement nor observations of how teachers employed their thinking in the classroom.

Wilson and Bai’s (2010) study is important to this research as it highlights elements of effective strategic teaching and emphasizes teachers’ understanding of the need to be cognitively aware of what, how and when they teach. However, my study seeks to investigate the declarative, procedural and conditional knowledge of what a teacher actually does in the classroom. Thus, the next section describes a small body of literature in which L1 and L2 longitudinal studies based on classroom observations investigated what it entailed to be a cognitive teacher and to cognitively teach.

**Cognitive teaching and modelling**

In an L1 study of elementary school teachers, Roehler and Cantlon (1997) investigated the social constructivist model of the zone of proximal development (ZPD) (Vygotsky, 1978) and how teacher talk plays an important role in scaffolding teaching. The teacher talk in Roehler and Cantlon’s study required rich explanation from participants. The study examined teachers’
declarative knowledge of what is learned, conditional knowledge of when it is used, and procedural knowledge of how it is used. The researchers advocated think-aloud modelling as teachers demonstrated the steps of the strategy. The study included examples of teacher talk that demonstrated a think-aloud process that engaged the learners by using rhetorical questioning. The following example is taken from teacher talk or a ‘learning conversation’ in a grade 5 classroom:

...You know what I was wondering? What causes that volcano to bubble like that? Can you think of a reason why? It would have to be something inside of the volcano, isn’t it?...Let’s think, if we could imagine anything we wanted. Could we say the volcano was a cooking pot for somebody and there was a big fire under there? What do you think? Any other ideas? What would be causing that volcano? Maybe, we could be thinking about that when we watch the next piece of videotape. (p.21)

Roehler and Cantlon established that the teachers employed think-aloud scaffolding to create opportunities for students to be engaged in the questioning process by hearing how the teacher thought. This was then transferred to partnerships and then to individual students. It was found that the learners began to engage in similar think-aloud, problem-solving processes as they attended to tasks. The researchers concluded that the social aspects of the activity combined with the teacher modelling promoted learning.

In the L2 composition class, Cumming (1992) conducted a case study of the teaching behaviours of three teachers. Observations varied from 6 to 11 weeks and teacher discourse was documented and analysed. Cumming found that teachers’ teaching practices fit within six routines, and the use of these routines varied according to the need of the students and occurred systematically at various time in the class. Routines were either proactive (involving explaining objectives, highlighting specific criteria for students to remember, and collaborating in discussion while the teacher modelled how), or they were responsive to individual students (providing types of feedback and seeking clarification of students’ knowledge). The last type of
routine involved classroom management either by engaging students at the beginning of the class, transitioning to a new aspect during the lesson or ending the session. Cumming found that classrooms were conducted as workshops of interactive social organization in which overall explicit presentation of the content was followed by an emphasis on task performance, often collaboratively. Cumming noted that these routines contravened conventional teacher-centred practices.

Similarly, Cumming (1995) argued for ESL teachers to use varying instructional strategies according to the students’ expertise while also considering the social aspects of learning. Cumming posited that effective instructional strategies or modelling could promote knowledge transforming (Bereiter & Scardamalia, 1987) in the classroom, suggesting students use strategies to transform writing knowledge and develop expertise. For example, this includes critically revising a piece of writing not only for grammar but also for ideas. Cumming broadly defined modelling as “anything a teacher might do to display writing for the purposes of helping students learn” (p.382) which focuses on textual, cognitive or social aspects of writing. Text modelling or text analysis entails explicitly showing examples of rhetorical patterns, yet Cumming warned that the modelling should not become a step by step process but rather become a holistic process in order to promote knowledge transforming strategies. Cumming’s concept of cognitive modelling, based on Bereiter and Scardamalia’s (1987) concept of knowledge transforming is important to this study. Cumming defined cognitive modelling as “demonstrating and practicing the kinds of thinking processes that experienced writers use so that students can become aware of, and can practice, the complex mental activities that characterize expert composing” (p.383). Cognitive modelling entails the teacher verbalising by thinking aloud the strategies needed to perform an aspect of writing. The final aspect is social modelling which includes having writing tasks that are purposeful and pertinent to the students’
academic goals. The social context can foster expertise by having group and individual work in a collaborative workshop type sessions where the instructor teaches strategies and facilitates their use through discussion and writing.

In summary, Pressley et al. (2001), Wilson and Bai (2010) and Cumming (1995) among others concur that teaching is cognitive and requires explicit modelling that utilizes verbalization during the demonstration. Cumming’s term ‘cognitive modelling’ seems appropriate in this study to describe what a teacher does when teaching in a literacy classroom in order to raise student awareness of the thinking process of experts. Next, this review considers academic literacy in the L2 university context.

**Academic Literacy**

Academic literacy is essentially “the ability to read and write the various texts assigned in college” (Spack, 1997, p 4). However, academic literacy is not just limited to reading and writing with interaction between the texts and the lectures, but it also depends on relationships in the social academic climate of the new environment including conferring or mentoring with professors (Belcher, 1994) and creating social networks with other students (Braine, 2002; Ferenz, 2005). In university, academic literacy is essential (Hyland & Hamp-Lyons, 2002; Newman et al., 2003), as students frequently need to employ reading and writing skills in the culture of the academic community.

**Challenges for L2 university students**

Every year, thousands of international and immigrant students enter the Canadian post-secondary education system. Many of these students do not have English as a first language yet they are expected to demonstrate literacy in the academic community. Successful literacy skills in academic environments include understanding lectures and taking comprehensive notes (Flowerdew, 1994), reading and comprehending academic course-related literature (Spector-
Cohen et al., 2001), writing exams and understanding assessments (Davidson & Cho, 2001; Johns, 1988), developing discussion abilities (Robinson et al, 2001), and writing papers that often are a compilation of research and critical analysis (Hirvela & Du, 2013; Leki & Carson, 1994).

Regardless of whether the students received high school education in their countries or in Canada, they are faced with challenges in the new context which include educational differences and power relations (Hyland, 2000, Pennycook, 1997; Swales, 1990), initiation into the discourse community (Johns, 1997; Spack, 1988; Swales, 1990), reading comprehension and writing expertise (Carrell, 1989; Carson & Leki, 1993; Casanave, 1988; Cumming, 1989; Cumming et al, 2004; Hirvela & Du, 2013; Hyland, 2003; Kroll, 2003; Leki & Carson, 1997; Riazi, 1997; Shih, 1992; Spack, 1997; Zamel, 1995), and lexical acquisition (Coxhead, 1999; Hulstijn, 2001; Laufer and Nation, 1995; Nation, 1990, 2001).

Studies revealed that students seem to have difficulty transferring skills and adapting to the new higher education environment as the literacy practices may be unfamiliar to them. Many of these studies focus on the writing aspect of literacy and the challenges faced by second language writers, many of whom could be international students (Ferenz, 2005; Leki, 2001; Li, 2007; Newman et al, 2003; Spack, 1997; Zamel, 1995). Other students challenged by literacy practices are not necessarily international students, nor are they recent immigrants. They are Generation 1.5 students, who are between generations, many of whom immigrated as children (Doolan, 2014). Generation 1.5 students’ English acquisition is often considered incomplete as they have strong oral and aural skills but weak writing skills (Ferris, 2009). Ferris describes Generation 1.5 learners as having similar problems to second language writers with specific language functions such as verb tenses and word choice. Accordingly, these learners experience
similar academic literacy challenges to ESL international students, and once in university they are often required to take developmental writing courses (Doolan, 2014).

Even though university students have many required readings and subsequent writing assignments, Hirvela’s (2001) study found that generally ELL’ preference is to read in their L1, and they dislike writing in either language, which is another academic challenge. Grabe and Zhang (2013) describe the main reading-writing tasks in the university context, which include note taking, summarising, paraphrasing, synthesising materials, taking various points of view to write a critical analysis, and writing research papers. These tasks give rise to another academic literacy challenge: plagiarism, which in academia is a punishable offence. Pennycook (1996) suggested that different cultures have varied views of writing ownership, and that sharing is considered acceptable practice in some cultures. This is apparent in some Asian cultures, where attitudes to plagiarism may not result in the same consequences as they do in English-speaking countries (Bloch, 2008). Consequently, Asian students might not view copying the work of another as a breach of academic integrity; thus, some students may not have an understanding of what constitutes plagiarism (Shi, 2011, 2012). Moreover, Bloch (2008) posited that the ease of digital hyperlinks in this technological age leads learners to multiple authors and increases the chance of plagiarism when cutting text from original sources. Furthermore, when students attempt to paraphrase these texts, an inappropriate similarity to the original may be produced, which is known as patchwriting (Andrade & Evans, 2013). However, Li and Casanave (2012) claim that patchwriting may not be intentional plagiarism but may be due to weak language or vocabulary development. Furthermore, patchwriting may not only be a result of language development issues or cultural differences but also of reading expertise and the ability to synthesise readings (Hirvela and Du, 2013). Grabe and Zhang (2013) point out that often students do not have the level of vocabulary to effectively summarize.
Furthermore, at the university level, a second language “student is expected to be able to read at the same level of comprehension as a proficient L1 reader” (Spector-Cohen et al., 2001, p.370). Intensive reading is the basis of most university assignments, and problems may arise due to a large volume of reading. L2 learners read at a slower rate, so this in combination with the quantity of reading “severely limits their ability to meet the challenges of required reading (e.g., course readings, professional documentation, Internet resources)” (Fraser, 2004, p.131). Critically assessing the texts is another challenge whereby learners have to skillfully synthesise and integrate information from a variety of texts and from these produce well-written texts of their own. However, for many students such a task is challenging when entering higher education environments. For example, Spacks’ (1997) longitudinal study of Yuko, a Japanese student attempting to adapt to a western academic environment, revealed the student’s difficulties in writing essays stemmed from her uncertainties of how to approach writing after critically reading a number of source texts. However, Zhang (2012) found that with explicit instruction, providing examples and modelling how to synthesise materials, learners improved in their abilities to write texts, which synthesised multiple readings.

**Solving the challenges**

For students to be accepted into university level courses, it could be assumed that their language abilities are intermediate or above with reasonably well-developed reading and writing skills. At this level, learners’ goals are to improve their academic skills such as having grammatical accuracy, summarizing texts and increasing reading fluency. Grabe and Zhang (2013) offer some instructional implications for helping learners with their academic literacy challenges. They suggest that instructors make use of textbook reading guides to note main ideas wherein the focus should on text organization. Additionally, development of vocabulary is key to success and should be pre-taught. The authors encourage practice in summary writing from
short articles, or having students keep journals to note key ideas in readings as this may help them integrate ideas from multiple texts.

However, Hirvela (2004) points out that if a learner has problems in one skill “the genesis of the problems may rest in the other skill—for example that problems in writing might actually start with problems in reading” (p.39). The question arises as to what extent knowledge and skills transfer from reading to writing and influence writing proficiency. Hirvela links reading and writing skills as being interdependent and building upon each other for expertise. The following section reviews this relationship.

**The Relationship Between Reading and Writing**

“Reading can be, and in academic settings nearly always is the basis for writing” (Carson & Leki, 1993, p.1)

“Writing knowledge informs the ability to read” (Hirvela, 2004, p.2).

These two statements by Carson and Leki (1993) and Hirvela (2004) highlight the interrelationship between reading and writing as one skill supporting the other. Fitzgerald and Shanahan (2000) noted that the knowledge shared between reading and writing includes knowing about the functions and purposes of reading and writing and being able to monitor one’s own meaning making. In a reading and writing class context, the teacher can actively teach ways to increase this knowledge and promote learner development (Bereiter & Scardamalia, 1987; Grabe & Zhang, 2013; Hyland, 2003; Palincsar & Brown, 1984).

The reading and writing relationship is important to this study, as I concur with the scholarly literature in the belief that the two skills are linked, yet students seem to struggle with either skill or both. Accordingly, the research questions in this study sought to draw upon this relationship by investigating the role of strategy training in the development of writing proficiency. In university contexts, professors might claim L2 students have poor writing skills,
yet the students’ problem may be an ineffective use of reading and writing strategic knowledge. Accordingly, different models of reading and writing connections are reviewed in order to establish part of the framework for this study.

**The three hypothetical models of the reading and writing link**

Traditionally, reading and writing were taught as separate skills: reading as a receptive skill and writing as a productive skill. In L1 research, Pressley (1991) posited that children use cognitive strategies to achieve any literacy task. Tierney and Shanahan (1991) found that children employed more strategies when the two skills were taught together than when the skills were separate. The reading and writing link has three hypothetical models, which are directional, non-directional and bi-directional (Carson, 1993; Eisterhold, 1990; Hirvela, 2004).

Arising from L1 research, Eisterhold (1990) viewed the directional model as knowledge and strategies from one skill transferring to the other; where one skill becomes input for the other with a more common transfer from reading to writing. The non-directional model is similar to the directional model, as common cognitive processes allow skill transfer in either direction. Cognitive reading and writing processes both entail meaning-making construction. In this model, improvement in writing, for example, will result in an improvement in reading (Eisterhold, 1990). Finally, the bi-directional model suggests that reading and writing have an interdependency that is related to the development of the learner, and that one skill will affect the other. This model is the most complex as it assumes a series of independent knowledge bases and that the interrelationship of these knowledge bases changes with the development of the learner. Eisterhold believed all these models are relevant to research and teaching, yet found the directional model most logical from a teaching perspective. Hirvela (2004) suggested this model has value as writing teachers need to know in which direction the skills should be taught - reading to writing or writing to reading. Eisterhold (1990) points out in her review of reading-
writing studies (Belanger, 1987; Stotsky, 1983, Taylor & Beach, 1984), that transfer from one skill to the other is not necessarily automatic but that direct instruction is integral to raising awareness of the structural components of the tasks.

Most current researchers agree that there is no specific directional model from reading to writing or vice versa, but that the relationship between reading and writing is reciprocally supportive in the development of the learner (Carson, 1990; Ferris & Hedgecock, 1998; Hirvela 2004). Furthermore, the reading-writing connection has important literacy building dimensions: reading-to-write, writing-to-read, and, a more recent strand of research, writing to learn. Hirvela (2004) and Hirvela and Du (2013) posited all modes inform pedagogical practices as to how teachers may develop lessons and teaching materials. The following sections describe these literacy connections.

**Reading-to-write**

First, reading-to-write is defined as the “goal directed activity of reading in order to write” (Flower et al, 1990, p.5). Readers transform information for their own purposes in order to write afterwards. According to Carson (1993) “reading and writing are equally important processes of a literacy event in which the most significant product is not the writing per se, but the meaning that has been created by the reader writer from both comprehending and composing text(s)” (p.85). In the classroom, this becomes a highly directed, explicit method of reading to point readers towards understanding choices that writers make (Kroll, 1993) by identifying main ideas and support, learning cohesive devices and linguistic features (Hirvela, 2004), developing lexical knowledge (Stoll, 1995), providing content input, and building rhetorical knowledge (Hyland, 2003; Kroll, 2003). Specifically, teachers can model certain genres by having students read sample essays (Smagorinsky, 1992) prior to writing their own.
Writing-to-read

The other dimension, writing-to-read, is “writing before, during, or after the reading enabling a reader to make sense of his or her reading, which in turn strengthens the quality of the reading and contributes to the development of L2 reading skills” (Hirvela, 2004, p.74). Writing-to-read means the actual physical act of writing engages the learner with the text by simply writing margin notes or writing down some critical thoughts at the end of a section. Zamel (1992) describes this active engagement with the text as “using interpretive strategies that give us insight into our meaning making” (p. 471). Leki (1993) suggests writing about a topic before reading activates schema. Other suggestions for writing-to-read include keeping journals of readings (Hirvela, 2004) or having a dialogic diary with a teacher as a means to scaffold writing development (Nassaji & Cumming, 2000).

Writing-to-learn

Writing-to-learn also posits a critical link between reading and writing and is a relatively new strand in L2 writing research, which has grown out of Emig’s (1977) research suggesting writing improves learning. Cumming (1990) posited that early composing research focused on the cognitive process of writing as a skill to learn, yet little attention had been paid to writing as a vehicle or tool for learning. In his study, student think-alouds while engaging in writing revealed that students make form-meaning connections and control and refine their knowledge of second language structures through writing. Schumacher and Gradwohl Nash (1991) suggested writing-to-learn enhances knowledge by reading, which is changed or transformed through writing. Through various writing activities, knowledge can then be applied to other writing contexts or purposes. Writing after reading means retrieving information, and writing about it demonstrates comprehension and learning. In language acquisition, it is generally supposed that oral and aural exposure develop language proficiency; however, once learners are able to read and integrate
texts, writing becomes a “means, context and basis for learning, both of language and writing” (Cumming, p. x, 2011). Zamel (1992) proposed that writing helps learners discover that reading is an active process, and through that process, they can learn about themselves as learners. As Craig (2013) pointed out, there is a difference between learning to write (the process of writing) and writing-to-learn (learning from writing). Learning to write is the instructional process of teaching, practicing, writing a draft, revising, receiving feedback and possibly revising again. However, writing-to-learn requires critical reflection and application or reformulation of knowledge.

**Think-alouds and learning**

Learner think-alouds are a valuable tool for understanding how learners engage in the writing process. Manchón (2011) called for a new lens for writing-to-learn theory that encompasses the meta-talk of think-alouds (Cumming, 1990) and the socio-cultural aspects of noticing language through collaboration in writing and the ensuing metalinguistic reflection (Swain, 2006). Storch (2009) posited that think-aloud meta-talk promotes language noticing at a deeper level. Cumming (2011) said that the process of writing demands strategic cognitive effort to access and regulate use of vocabulary, grammar and content. He also noted that think-aloud protocols are a product of the nature of writing that affords understanding of how learning occurs while writing. Manchón (2011) concurred that think-alouds show linguistic development and acquisition occurring through writing. In a review of writing studies, she claimed that if the writing task is less guided, then students’ focus their attention on vocabulary, and if the task has a grammar focus, then their meta-language focuses on grammar. Finally, Manchón concluded linguistic processing and learning are promoted by writing; however, the amount of attention paid by the learner may depend on task type and individual processes. The above models
(Cumming, 1990; Storch, 2009) have established that meta-language or think-alouds give insights into how students learn during the composing process.

The scholarly literature reviewed suggests the integration of reading and writing has literacy building connections: reading-to-write, writing-to-read, and the more current broad spectrum of writing-to-learn. The studies reviewed revealed that the development of reading-to-write or writing-to-read skills is a lengthy process. Nonetheless, student think-alouds can give valuable insights to their meta-language and learning. Accordingly, instructors can guide learners to new level of academic literacy by directly teaching the strategies they need.

**Cognition in Learning Strategies**

So far I have reviewed the characteristics of excellent teaching suggesting that cognitive modelling with verbalized demonstration of an expert is integral to promoting learner success (Cumming, 1995). Then, I reviewed academic literacy and the importance of the interrelationship of reading and writing. In further developing the framework for this study, this section examines the important role that cognition, the mental abilities to process information and apply knowledge, plays in teaching and learning. This section reviews cognition, historically known as metacognition, and then reviews the current trend of cognition in learning.

**A brief historical overview of metacognition**

Flavell (1981) posited that when a task is complex or problematic, the learner engages in metacognitive processes that attend to and regulate cognitive processing. Flavell defined the term metacognition as “knowledge or cognition that takes as its object or regulates any aspect of cognitive endeavor” (p.37). In essence, metacognition entails thinking about the self, and the relationship to the task at hand, and controlling the learning process (Baker & Brown, 1984; Jausovec, 2008).
Metacognition can be divided into two aspects: knowledge and control. Metacognitive knowledge is having awareness or knowing about how one thinks or how one’s cognitive processes work. Metacognitive control pertains to how the learner actually controls the cognitive processes by using strategies. To bring clarity to the meaning of metacognition, Flavell (1987) proposed a taxonomy to categorize metacognition in which he described metacognitive knowledge and metacognitive experience. Metacognitive knowledge refers to awareness of the self as a cognitive being, awareness of the task variables, and awareness of strategies available to achieve task goals. However, metacognitive experience pertains to consciously planning to use strategies and subsequently monitoring, testing, regulating, revising and evaluating the success of the task.

As Flavell (1987) posited, metacognitive experience entails going beyond the awareness of metacognitive knowledge and involves a strategic plan of how to approach a task. Strategies are deliberate, controlled actions chosen by learners to facilitate learning and task performance. In other words, they are problem-solving behaviours that a learner systematically chooses to use to improve performance or proficiency (Garner, 1987; Oxford, 1990; Allen, 2003). Accordingly, strategies are utilized across a broad spectrum in order to achieve task goals efficiently and effectively. Flavell (1981) noted this process entails having declarative knowledge of the strategies available, procedural knowledge of how to apply the strategies, and conditional knowledge of why and when to choose a specific strategy.

For many years, studies have agreed that metacognitive knowledge is important in language learning (Carrell, 1989; Casanave, 1988; Horowitz, 1987; O’Malley & Chamot, 1990; Wenden, 1998). Studies have shown that student metacognitive knowledge or awareness and learner strategies generally could be connected to student success (Chamot et al, 1999; Oxford, 2001, Wenden, 1991). In the L2 teaching and learning context, Wenden (1998) noted that
planning or thinking about the organization of a task, monitoring or paying attention to the task, and evaluating success of the task all required that metacognitive knowledge was activated. Accordingly, she suggested that instructors who explicitly teach and demonstrate tasks can facilitate the learners’ metacognitive thought activation processes. When this knowledge is triggered, learners can self-regulate learning and have opportunity to be active in their own learning.

**The current view of cognition**

Flavell’s (1981, 1987) and Wenden’s (1998) definition of the term ‘metacognition’ suggests that the metacognitive process is a separate mental process from the act of ‘cognition.’ Further, Flavell’s construct suggests that when a task becomes problematic the learner’s thinking switches from cognitive processing to metacognitive. Cognitive skills can be explained as declarative knowledge of what, procedural knowledge of how, and conditional knowledge of why and when (Anderson, 1981, Flavell, 1981, Wenden, 1998), and these processes have become automatic for experts. However, through the years, researchers focused on metacognition as being defined as problem-solving behaviours (e.g. Bialystok, 1990) and ‘thinking about thinking’ (Flavell, 1981).

Dörnyei and Scott (1997) departed from earlier researchers in their review of communication strategies through questioning whether using strategies only as a conscious means to repair comprehension failure was an accurate description of metacognition. They also questioned whether consciousness was an accurate way to describe the use of strategies as it is unknown how the degrees of consciousness could be measured. Furthermore, sometimes strategies become automatic as they become part of routine and are no longer part of the immediate consciousness (Gass & Selinker, 1994). In their review of taxonomies of communication strategies, Dörnyei and Scott (1997) conclude that researchers’ orientations
towards language analysis has created the variations in the definitions of the cognitive processing when learners employ strategies. Previously, Schmidt (1994) had suggested that consciousness be divided into intentionality, attention, awareness, and control. Similarly, Dörnyei & Scott (1997) have proposed a division of consciousness into awareness of the problem, intentionality to do something to solve the problem and awareness of strategic language that may or may not solve the problem. In other words, consciousness is a form of control of knowing what to do. In previous metacognitive constructs, the term metacognitive control had been used as a definition along with metacognitive awareness (Flavell, 1981). However, Dörnyei and Scott (1997) suggested control was not a defining factor of strategies; rather, it becomes part of the instructional element in strategy training as the goal of training is to automatize the cognitive processes of the strategies being taught.

Accordingly, in this study the terms cognition or cognitive strategies are used to describe what learners do when problem-solving a task with no distinction between cognition and metacognition. Similarly, it could be said that teachers could follow the same cognitive process when instructing: they have an awareness of their learners’ problem, the teacher intentionally begins to teach strategies to solve the problem, and the teacher has the awareness to know if the strategy was successful or not such as if the learners had resorted to another plan such as using L1 to solve their linguistic problem. Indeed, returning to Cumming’s (1995) description of what teachers do as ‘cognitive modelling,’ suggests that they model the strategy in a way that an expert would in order to scaffold the strategy to student learning.

This section has discussed how contemporary literature often does not regard cognition and metacognition as being distinctly different. The following sections will continue to examine the concept of cognition or cognitive strategies specifically in reading and writing theory and strategy instruction.
Cognition and Strategies in Reading and Writing

In order to draw the theoretical connections between reading and writing, this section will first briefly review the role of cognition in reading comprehension and in writing theory, first from a brief historical perspective and then focusing on current trends. Afterwards, an overview of reading and writing strategies is provided.

Reading comprehension: A brief overview

Reading comprehension theories are predominantly grounded in first language research. The goal of being able to read, whether it is in a first or second language, is to comprehend the text. How comprehension occurs has been important to cognitive psychologists, and most certainly to educators in order to be able to understand and to help readers improve reading ability, for not all readers are skilled “comprehenders”. According to Perfetti (1985), reading is “at the same time, both cognitively trivial and so difficult that failure at learning to read is common” (p. 3). Reading is a complex process whereby the reader has to engage in a variety of linguistic and cognitive processes from letter and word identification, to creating meaning across pages, to having to evaluate and possibly critique the text argument. Many theories of reading have been discussed in the literature including the bottom-up or text-driven model, which focuses on decoding the text (Perfetti, 1985; van Dijk & Kintsch, 1983); the discourse processing theory, which focuses on the mental processes of text comprehension (Kintsch, 1972, 1977, 1988, 1998); the metacognitive theory of reading, which highlights comprehension monitoring as essential and includes plentiful strategy use (Baker & Brown, 1984); reading response theory, which highlights that text meaning varies from the author of the text to the reader (Rosenblatt, 1938) and values how the reader engages with the text (Beach, 1993; Hirvela 2004), and schema theory, which is focused on the role of top-down processing activated by the reader’s prior knowledge or schema (Anderson & Pearson, 1984).
The current view of reading and strategies

Grabe (2009), in his overview of reading research, interpreted L1 reading theory for the purpose of L2 educators. He highlighted that reading is not a purely top-down and bottom-up process, and that these terms are essentially metaphorical descriptions. He suggested that the Verbal Efficiency Model (Perfetti, 1985, 1999, 2007) and the Interactive Compensatory Model (Stanovich, 1986, 2000) both essentially propose that top-down processes are not necessarily interrupted in order to engage in a bottom up process such as word recognition. In fact, readers are both top-down and bottom-up readers at all times because reading is interactive. Grabe (2009) illustrated that “automatic lower-level processes do not interact strongly with higher-level processes. In order to run in parallel, automatic lower-level processes cannot be interrupted by conscious intrusions or they will slow down and become inefficient” (p.55). Grabe (2009) asserted that readers continuously use background knowledge to complement textual information for meaning construction. He further described another level of interaction that entails simultaneous processing of the lower-level skills such as decoding words with the higher-level comprehension skills that employ strategies. Therefore, learners are continuously engaged in automatic and strategic processing in order to comprehend texts. Grabe highlighted that besides interactive processing, second language learners need to have skills in:

(a) recognizing discourse structure and discourse signalling in texts;  
(b) applying comprehension strategies at an appropriate standard of coherence;  
(c) synthesising and evaluating information through strategic processing; and  
(d) monitoring comprehension as well as setting and changing goals for reading. (p. 57)

He also pointed out that building comprehension skills is a lengthy process and is beyond the instructional scope of a semester in a classroom. However, he suggested that there are teaching implications for classroom strategy training in order to develop learners’ comprehension skills.
Cognitive reading strategies

Essentially all readers, in both L1 and L2, use the same general cognitive processing strategies of predicting, testing and confirming a hypothesis while constructing text meaning (Block, 1986; 1992). Historically, reading strategies were divided into cognitive and metacognitive (Carrell, 1989; Casanave, 1988; Horowitz, 1987; O’Malley & Chamot, 1990). More recently, reading theorists concur there is no distinction between cognitive and metacognitive strategies. Of this view, Grabe (2009) wrote, “This bold statement is meant as a response to more common misinterpretations” (p.223) of there being two sets of strategies; instead, strategies are employed with levels of awareness and control. Pressley (2002) and Baker (2002) both stated that monitoring comprehension or repairing comprehension failure are not in themselves strategies. Any strategy can be applied for comprehension and repair with no mental shift to a metacognitive strategy. Grabe (2009) suggests that strategy use is driven by levels of awareness, which is rather like Dörnyei and Scott’s (1997) position that awareness, intentionality, and knowing the use or controlling the use of strategies describe cognitive strategies.

Readers use a number of specific strategies during the reading comprehension process. An abundance of research is situated in L1 reading studies with Michael Pressley being prevalent in researching strategy use in reading comprehension (Pressley, 1994, Pressley, 2002; Pressley & Afflerbach, 1995.) Pressley and Afflerbach (1995) proposed a constructively responsive reading model that created a complex model where the reader constructs text meaning through monitored strategic processes. The researchers conducted a meta-analysis of 38 think-aloud L1 primary research studies in order to describe these processes of strategies and responses that readers consciously make. The chosen studies investigated a variety of L1 readers ranging from grade 6
to graduate students and the results provided an extensive overview of strategies used by skilled readers and were categorized as meaning construction, monitoring and evaluating strategies.

Meaning construction or learning strategies are sub-divided into before, during and after reading use and list many potential activities that a reader could utilize in order to create meaning. Pre-reading strategies include such behaviours as being aware of goals, skimming the text to decide what to read, activating prior knowledge and making an hypothesis of what the reading is about. In the employment of during-reading strategies, cognitive text-driven and knowledge-driven processes occur in order for a reader to engage in constructing text meaning. These strategies include looking for keywords, finding topic sentences, making inferences, generating questions about the text, and relating text to personal experiences. The reader then engages in post-reading activities that include self-questioning, summarizing, and rereading.

Pressley and Afflerbach (1995) pointed out that no reader would likely use all of the strategies listed in their meta-analysis; in fact, strategy use would vary depending on the reading purpose as well as the text characteristics.

Pressley and Afflerbach’s (1995) meta-analysis highlighted that once comprehension fails, skilled readers resort to monitoring strategies. Monitoring is a shift from automatic text processing to intentionally selecting a behaviour to repair comprehension failure. Fix-up strategies are the same activities as are used in the meaning construction process; however, once they become fix-up activities, they have a new role for fostering comprehension. The strategies employed range from the text-driven word level process of using context clues and word parts and making guesses to a more knowledge-driven process of formulating questions about overall text meaning. These strategies include clarifying, establishing goals, paraphrasing, predicting, and inferencing, synthesising information and taking notes. Other monitoring strategies entail
making decisions to continue reading or to re-read a section of text. Skilled readers even continue monitoring post-reading by systematically reviewing what was read.

The final strategy category in Pressley and Afflerbach’s (1995) meta-analysis is evaluating the success of comprehension. This strategy can occur while reading or after-reading. They suggest, “Monitoring is focused on making processing decisions and is future-oriented – what to do next; evaluation focuses on the worth of what has been processed” (p.79). Evaluation can include critically assessing content and writing style, and includes examining the affective reactions to the reading process such as frustration and anxiety, or feeling satisfied at having understood difficult text.

Drawing upon L1 reading research, Grabe (2009) concurred that summarizing, forming questions, answering questions, activating prior knowledge, monitoring comprehension, using text structure awareness, using visual graphics and graphic organizers, and inferencing are the eight strategies that empirical research has identified as supporting L2 reading comprehension. Pressley (2002) noted that comprehension strategies are easier to teach than monitoring strategies as how comprehension is monitored depends on the reader. In fact, Grabe (2009) pointed out that choosing to use any strategy for comprehension could be viewed as a form of monitoring.

Grabe (2009) suggested good readers employ effective strategies unconsciously. When comprehension fails, expert readers consciously turn to these strategies and know how, when, where and why to use them (Grabe, 2009, Zhang, 2008). Expert readers are able to move back and forth in a text and not lose comprehension (Pressley & Harris, 2006). While expert readers flexibly employ cognitive strategies, novice and weak readers do not exhibit such behaviours and tend to spend time decoding a text and read the text in a linear way (Pressley and Harris, 2006). Weak readers are less likely to use appropriate strategies for different goals and have greater difficulty activating control over the strategies they do know (Baker & Brown, 1984; Palincsar &
Brown, 1984). It should be noted that some of the monitoring strategies such as paraphrasing, inferencing and synthesising are deemed challenging by Grabe and Zhang (2013) for students in academic literacy classrooms and that these strategies should have an instructional focus.

Both Pressley and Afflerbach (1995) and Grabe (2009) claimed that comprehension instruction entails implementing strategies for students to use when they are in the process of constructing main ideas of readings. This can be achieved through teachers having scaffolded discussions as the students are reading the text. Scaffolded discussion as an instructional tool for meaning making includes decision-making of the types of strategies to employ (Heeney, 2005; Palincsar & Brown, 1984). Grabe (2009) suggested that strategy-training activities should be explicit and direct and should be conducted at any point in the reading process—before, during, and after.

This section has reviewed basic reading theory and included an overview of cognitive reading strategies. The following section considers writing theory and the role of cognitive strategies in writing.

Writing theory: A brief overview

This section briefly reviews writing theory first from a historical perspective, and is followed with contemporary perspectives. In early L1 and L2 research, writing models were product-oriented with a focus on the discrete linguistic aspects of writing (Cumming, 2001, Grabe, 2001, Hyland, 2002). Cognitivists began to look at writing as goal-directed processes of composing to create meaning. As in reading, the writer undergoes a complex process including a series of transforming and restructuring knowledge through the use of cognitive strategies (Bereiter & Scardamalia, 1987; Block, 1986, 1992; Carrell, 1989; Flower & Hayes, 1981, Zamel, 1983). With the emergence of Vygotskyian sociocultural theories, studies turned to considering the effect of social interactions; for example, when learning takes place through the co-
construction of knowledge at a level that is just beyond the competence of the learner or the zone of proximal development. These studies consider the importance of scaffolding and peer interaction as integral to learning (Aljaafreh & Lantolf, 1994; Cumming, 1995; Nassaji & Cumming, 2000; Salataci & Akyel, 2002).

Following these earlier theories, there are two important seminal models of the writing process that have influenced writing research for over the last two decades, Flower and Hayes (1977, 1980, 1981, 1984) and Bereiter and Scardamalia (1987, 1991), to which this review now turns.

**Flower and Hayes’ Cognitive Process Model**

In the late 1970’s, Flower and Hayes (1977, 1980, 1981, 1984) developed a cognitive model to represent the writing process. Prior to their research, writing had been considered a linear process of pre-writing, writing and revision. In 1980, Flower and Hayes offered a framework of the writing process depicting the writer as goal-directed and involved in an interactive metacognitive process of developing the written text by continuously organizing and re-assessing goals. This model was divided into three components: the task environment, the writer’s long-term memory, and the composing processor. The task environment includes the writing task and the actual written text, and the long-term memory is the knowledge of the topic, the audience and the rhetorical pattern.

In the composing processor the writer plans, translates (writes on the page), and reviews (evaluates or edits) the written text. A metacognitive control mechanism called the monitor manages these three processes. The planning process is subdivided into generating ideas, organizing information and setting goals, all of which are mediated by long-term memory (knowledge of the topic, audience and writing plans) and reviewing. Organization is more than just putting the generated ideas into a specific order, as it requires decisions about main and
subordinate ideas. Organization can be governed by goal setting as changing goals can occur at any moment in the composing process. The next stage in the process is translating or transcribing, which becomes complex, as the writer has to pay attention to the many norms of English such as spelling and grammar as well as the organization of ideas. The reviewing stage depends on two sub-processes of evaluating and revising, which can occur at any time in the composing process. Flower and Hayes call the monitor a “writing strategist that determines when the writer moves from one process to the next” (p.374). Writers make executive decisions in their writing, a form of metacognitive control. The monitor process is individual depending on the writer. This too suggests that novice writers might switch processes too soon which also implies they are less metacognitively aware of how to control the process. This model has dominated writing theory for years, yet it has been criticised for not accounting for different strategies writers might employ (Grabe & Kaplan, 1996). The monitor as a ‘writing strategist’ implies that there is deliberate cognitive shift in thinking to metacognitive while writing; accordingly, although this model is of historical importance, it does not suit the currently viewed cognitive construct.

**Bereiter and Scardamalia’s Knowledge telling and Knowledge transforming Model**

Based on Flower and Hayes’ (1981) “plan-write-review” writing framework, Bereiter and Scardamalia (1987) considered the integration of the social factor of scaffolding from novice to expert with the cognitive. The researchers define novice or ‘immature’ and expert or ‘mature’ writers through their distinction between knowledge telling and knowledge transforming composing processes. Immature writing or “knowledge telling is a way to generate text content, given a topic to write about and a familiar genre” (p.143). The authors state “novice writers generate 70% of their ideas in response to the topic assignment or to the last content item considered” (p.163). Novices depend on knowledge that is either in memory or perhaps through
a teacher-directed activity. The immature writer may not plan or revise well, nor may the writer consider audience awareness. In this model, writers tend to generate information from the assignment, the topic or lexical items regarding the assignment, and then the writer may not consider what was just written and may just continue adding information. On the other hand, mature writing or knowledge transforming is a problem-solving process. This leads to an analytical method of writing that includes setting goals, changing goals as the need arises, analyzing what was written, editing, and drawing upon memory for more facts.

Bereiter and Scardamalia’s research also concluded that knowledge transforming allows mature writers to draw upon memory for other ideas or engage in readings in order to be able to use other sources to build upon their own ideas. In this model, solving problems may lead to new problems within the writing, so that the writer has to cognitively engage in the writing in order to revise and rewrite. This self-analytical writing, being aware of the audience and writing in a socially conscious manner, is what transforms a novice writer into a mature writer. The authors call for instructors to repeatedly model and explain the thinking process of expert writers and to scaffold these processes so that learners can move from being novices to experts.

Bereiter and Scardamalia’s (1987, 1991) L1 models offer noteworthy explanations of the cognitive process to develop writing expertise that have relevance to this study as they posited that writers need to be exposed to expert composing processes. Through instruction, novice writers can be guided to re-think what they wrote and to move beyond the knowledge telling phase. Bereiter and Scardamalia suggest that this process is “not an incremental process but rather rebuilding of cognitive structure” (p.173). Unlike Flower and Hayes’s model (1981), this model does not seem to imply a separate monitor or metacognitive processor.

Rijlaarsdam and van den Bergh (2006) questioned Flower and Hayes (1981) monitor model by asking, “How does a cognitive system “know” which activity should follow a
particular activity, and how does a system “know” that some combinations of activities must be frequent in a certain phase of the process?” (p. 50). Rijlaarsdam and van den Bergh suggested that this knowing is not a metacognitive shift to retrieving information; rather, it is parallel processing where the cognitive connections develop over time. As a writer’s text grows, the cognitive connections adapt to the text changes. The researchers described cognitive activities as units and suggest that more experienced writers produce larger units. Their research proposed that during a think-aloud, the writers’ process seems linear as they can only verbalise one idea at a time. In actuality, during the composing process activities are related through parallel processing. For example while a writer re-reads for content, grammatical errors are noticed and then attended to. It is important to note that writers who take time to re-read texts during the writing of texts tend to produce a better text than the writer who attempts to re-read and edit at the end of the writing process.

**The current perspective: Revising the Hayes’s Monitor Model**

In response to the shift to the current views of cognition, thirty years after the first model, (Flower and Hayes, 1980), Hayes (2012) revised his model based on a number of empirical studies he had conducted over the years. To the model, he added a transcription process and motivation, and removed the monitor, the planning process and the revision/reviewing processes. Through two studies, Chenoweth & Hayes, (2001, 2006) found that verbal memory taxed handwriting in adults, computer practice improved ninth graders writing, and young children had better texts if they dictated them, all of which accounted for the addition of transcription to the model. This new composing model includes motivation as it affects how much and how long people write and how much they revise. Hayes, Schriver, Hill and Hatch (1990) found that motivation varied in writing classes with both honours students and basic writers. It was found that the honours students were highly motivated to succeed in their courses. Hayes (2012)
believed that individual differences affecting motivation were not reflected in the original model. Accordingly, the monitor was removed, as originally, it was supposed to account for individual differences between writers. Furthermore, Hayes believed that for thirty years, the monitor had been misinterpreted and viewed as what controlled the process of writing: a form of metacognitive control. Moreover, Hayes removed the revising process as he considered it “a specialized writing activity…initiated by the detection of a problem in an existing text” (p.376). In other words, revising is not a separate metacognitive activity but is a strategic plan initiated when a problem is detected in the writing. Chenoweth and Hayes (2001) also found that writing tasks that did not focus on revision allowed students to write more fluently giving them increased opportunities to practice writing strategies.

However, Hayes (2012) does mention the need for explicit modelling of how experienced writers revise. Drawing upon Bereiter and Scardamalia’s knowledge telling and knowledge transforming model, Wallace and Hayes (1991) agreed that children will not have the skills to revise, while the authors thought college-aged writers might. The researchers implemented 8 minutes of explicit modelling of what experts do in the revision process, and the college students demonstrated an immediate improvement. Wallace and Hayes posited that explicit instruction and modelling become declarative knowledge kept in long-term memory as a cognitive plan that can be retrieved and used again. Hayes (2012) also called planning a specialised activity in that goals are set, ideas are created and evaluated, and then are translated and transcribed to create a piece of writing. He stated planning could not be a separate metacognitive element of the writing process as it is actually continuously being performed within the writing model. This model and Bereiter and Scardamalia’s (1987) both are relevant to this study as they offer a cognitive process of how writing occurs suggesting that there is no separate metacognition; rather, the process is
recursive whereby cognitive activities such as revising, reviewing, summarising are stored in long term memory to be retrieved and used.

**Cognitive writing strategies**

The seminal models by Bereiter and Scardamalia (1987), and now the current model by Hayes (2012) have been extensively adapted to the L2 learning context. However, these models do not account for some L2 writing difficulties, which are based on different orthographic systems or cultural differences. For example, writing is affected by contrastive rhetoric (Kaplan, 1987) or various organizational patterns that differ from one culture to another. Research in contrastive rhetoric also considers cohesion and coherence, text macrostructure, organization of information, argument structure, schemata, and inferencing (Grabe & Kaplan, 1996; Kubota, 1997) as being problematic for L2 writers. Furthermore, other L1 influences on the L2 include differences in syntactic and lexical features (Reid, 1990), previously taught composing processes, and additional languages the learner speaks (Grabe & Kaplan, 1996).

Grabe and Kaplan’s (1996) had criticised Flower and Hayes (1981) for not being specific as to what strategies are generally employed in the writing process. Accordingly, they developed a general taxonomy of academic writing skills, knowledge bases and processes including strategies, based in part on Canale and Swain’s (1980) model of communicative competence and in part on Grabe and Kaplan’s (1996) ethnography of writing in which they ask the question “*Who writes what to whom, for what purpose, why, when, where, and how?*” (p.203). In examining these questions, Grabe and Kaplan developed an extensive taxonomy that built on their ethnography of writing and situated writing in terms of setting, writing tasks, educational texts, academic writing topics, and writers’ goals (See Grabe & Kaplan, 1996, pp. 217 -222). Further, this taxonomy came to inform their theory of writing, which they view in terms of
linguistic, discourse and sociolinguistic communicative competencies combined with the skills and strategies of the writing process.

Of interest to this study is Grabe and Kaplan’s list of executive control strategies, which they relate to Bereiter and Scardamalia’s (1987) knowledge transforming process. Some of the more relevant writing strategy categories are generating content, monitoring text production, task problem-solving and revising and editing. They are listed in the order that they appear in the text; however, as some of the strategies were not in the scope of this research, they were excluded from the numbered list.

Writing process strategies (executive control)

1. Monitoring text production
2. Generating additional content
3. Considering task problems (audience, purpose, rhetorical, language, compensating strategies for weakness in linguistic, discourse and sociolinguistic knowledge.
4. Using invention strategies, ‘topics,’ brainstorming, free-writing
5. Using reading resources (texts, dictionaries, data, etc.)
6. Rejecting content/rhetorical information/alternatives
7. Summarizing/paraphrasing/reordering information
8. Using notes/outlines/drawings/other self-created materials
9. Getting assistance
10. Reassessing/changing goals
11. Editing texts
12. Reassessing content/rhetorical strategies
13. Getting feedback from others
14. Considering the audience
15. Considering individual style concerns (voice) (adapted from p. 222)
This is a general list of strategies but it is not inclusive of all strategies learners employ. Grabe and Kaplan (1996) suggested that this taxonomy be used as a framework for planning curricula. They call for teachers to have insights into the writing process, and to use the taxonomy for setting goals related to the content that should be taught to students. Grabe and Kaplan suggested that writing courses be “an apprenticeship training in which teachers act as knowledgeable experts who can model effective writing practices” (p.262). Teachers should raise students’ awareness of strategies, guide them in their linguistic choices, and importantly, engage students in their skill development so that they can transfer the knowledge to other contexts.

The following sections review relevant studies in learner development and instruction in both reading and writing.

**Review of descriptive reading strategy studies**

A review of the literature leads to two areas in reading and writing strategy research. The first is the descriptive research in which development of students’ cognitive awareness is investigated (i.e. what learners do), and the other strand is experimental research in which the effectiveness of teaching cognitive strategies is evaluated. Frequently, descriptive studies inform experimental studies of what to teach (Grabe, 2009), which is the focus of this section.

In a comparative L1 and L2 study, Block (1986) used think-aloud protocols to study the reading comprehension process in both remedial native English speaking students and ESL readers. In 1984, Block chose 9 participants for the study, all of whom had a low score on the college’s proficiency test. Six were in an ESL remedial reading class (3 Spanish and 3 Chinese speakers), and 3 were in a remedial native English speaker class. The ESL learners were considered to be proficient in English based on assessment by the reading teachers. In the study, after two practice sessions, participants were taped as they thought aloud while reading two
passages. Then, the participants silently re-read the text, provided an oral recall, and answered multiple-choice questions to test memory and comprehension. Block found two patterns of strategy use. The “Integrators” were B students academically, and they were able to integrate information and monitor comprehension effectively. The common strategies participants focused on were recognizing text structure, anticipating (predicting), questioning the text, word solving, correcting and monitoring comprehension. The “Non-integrators” were all C- students, and they depended on personal experience to derive meaning from text and had difficulty employing strategies to connect information within the text. Block suggests this indicates a link between strategy use and the ability to learn. No difference was found between native English speakers and ESL learners, which suggests that strategy use is constant whether it is in native speaker or second language learner.

In another L1 and L2 comparative study, Block (1992) investigated the comprehension monitoring process of skilled (n=16) and less skilled readers (n=9), with 8 L2 readers in the skilled group and 6 in the less skilled group. Data were collected from think-alouds as participants read expository texts and thought-aloud after reading each sentence. Block had designed the text with specifically difficult vocabulary and pronoun referents. Results revealed that proficient L2 readers performed as well as skilled L1 readers, whereas both L1 and L2 unskilled learners performed poorly. Proficient readers were able to recognise and identify the problem, take a strategic action and then check that the action had been successful. On the other hand, the less proficient readers were sometimes able to identify the problem but they could not formulate a strategic plan. This study highlights the importance of the role of cognitive strategies within the reading process.

Li and Munby (1996) examined awareness of strategy use at the university level. Li’s own experiences and difficulties when reading in L2 prompted the research questions: “What
metacognitive strategies do L2 readers use in their academic reading?” and “How do they use these strategies?” The study had two Chinese graduate student participants, a male and a female both in their mid-twenties. Data were collected from interviews, think-aloud sessions and participants’ journals. Results showed that the participants actively used cognitive strategies such as the use of background knowledge, self-questioning and predicting. However, when there were difficulties, the participants struggled to find repair strategies. Typically, participants resorted to translating from L2 to L1 to construct meaning, which was considered an ineffective strategy. Li and Munby (1996) suggested that ESL teachers need to focus on more than one specific strategy so that learners become aware of the wide range of available strategies.

This brief overview reveals that several scholars have found that successful L1 and L2 readers use a variety of cognitive reading strategies (Grabe, 2009; Pressley & Afflerbach, 1995). In particular, proficient readers are strategically competent, whereby they know their cognitive limitations, as they are consistently able to make appropriate decisions to repair comprehension failure (Kintsch, 1998; Koda, 2005; Pressley & Afflerbach, 1995). In addition, readers can improve reading ability over time by repeatedly using appropriate cognitive strategies so that they are proceduralized into long-term memory and become automatic (Baker & Brown, 1984; Koda, 2005; Pressley & Afflerbach, 1995). On the other hand, poor comprehenders do not engage in many of the reading strategies listed in the taxonomy either because the readers may not have the basic language skills or they may not have the strategic knowledge and control to negotiate comprehension (Block, 1992; Li & Munby, 1996).

**Review of reading instructional studies**

As the readers’ think-alouds in the descriptive studies in the previous section revealed, strong readers use strategies while weak readers could benefit from direct strategy training. This review now examines strategy-training studies that have investigated the success of direct
strategy training in order to raise awareness and control of important reading strategies in both L1 and L2 readers.

Empirical research includes multiple-strategy instruction approaches such as the Reciprocal Teaching Approach (Palincsar & Brown, 1984), Experience-Text-Relationship, ETR (Carrell (1989), and Collaborative Awareness Reading Training, CART (Heeney, 2005), and the constructively responsive reading model (Pressley & Afflerbach, 1995). Importantly, irrespective of the approach, Pressley (2002) suggested that it is necessary for instructors to understand the reading comprehension process in order to provide effective instruction for developing skillful reading. Grabe (2009) highlighted that the instruction needs to be explicit and direct. For example, comprehension-supporting reading strategies could be a discussion around the text with the teacher modelling the strategic behaviours. Teachers can explain what the strategies are, and where, when, how, and why they can be used, as well as how they can be adapted to various situations. Grabe (2009) noted that teachers can be taught how to involve students in this scaffolded discussion and engage them in the text while they are reading, as it is this integration of text, discussion and strategies that promotes learner awareness (Pressley, 2002). In addition to modelling specific behaviours, teachers should provide feedback on student strategy use (Anderson, 1991; Carrell et al., 1998). The following reviews some studies on instructional reading training.

In a seminal first language study of strategy training, Palincsar and Brown (1984) found that the explicit teaching of strategies was effective for improving reading comprehension in remedial readers. Strategy training sessions were conducted on below average L1 readers in grade 7. Palincsar and Brown (1984) developed a training procedure called the Reciprocal Teaching Approach, guiding students to use a process of four ‘good’ cognitive strategies while reading: questioning, summarizing, clarifying and predicting. The teacher modelled the
approach by thinking aloud and leading the class in text-related discussion, and assisting in identifying what strategies to use. In order to validate results, Palincsar and Brown (1984) conducted the training with two different groups at different times, and both studies revealed significant improvement in comprehension question scores from 40% to 80% accuracy by the end of the training period. Also implementing the Reciprocal Teaching Approach, Lynsychuk, Pressly and Vye (1990) conducted a study on Grade 4 and 7 poor “comprehenders”, and their results were consistent with those of Palincsar and Brown (1984).

The Reciprocal Teaching Approach is based upon Vygotsky’s (1978) theory of the “zone of proximal development,” (ZPD) which is the area just beyond the learners’ abilities to do the task well alone. When scaffolding instruction, the teacher models the strategies; in other words, the teacher actually performs the activity in front of the students rather than telling them how to do it. By scaffolding the strategies with teachers or peers, the learner is guided to success so that eventually the scaffold is removed and the learner does the task alone. Importantly, for successful training, learners need to know the role of strategies in reading, and Palincsar and Brown (1984) stated “…students were specifically told that these activities were general strategies to help them understand better as they read, and they should try to do something like this when they read silently” (p.131).

In another relevant L1 study, Bereiter and Bird (1985) carried out an instructional strategy study that focused on teaching four repair strategies of restatement, re-reading, demanding relationship, and problem formation. They investigated the difference in two grade seven and eight L1 groups, whereby the experimental group received a detailed rationale for strategy use plus modelling, and the control group received just modelling of the strategies. The training was scaffolded, and students used think-alouds as they worked their way through the strategies during reading tasks. Results showed that students who received the rationale plus
modelling scored higher on comprehension tests than the control group. Bereiter and Bird (1985) concluded that learners need more than having the strategy modelled, but they also need the cognitive awareness of knowing which strategy to select.

Salataci and Akyel (2002) compared the effectiveness of different training techniques by replicating Carrell’s (1989) ETR (Experience-Text-Relationship) method and Palincsar and Brown’s (1984) RTA (Reciprocal Teaching Approach) with Turkish students (N=20) who received training in both English and Turkish in a 4-week, 3-hour a week training session. Data collection was from observation, interviews, a background questionnaire, and 8 student think-aloud protocols. Results indicated that strategy use increased in both English and Turkish which suggests bi-directionality of strategy transfer, with the strategies employed being predominantly predicting, summarizing and using prior knowledge. However, the researchers describe this training as effective but time consuming. They suggest that small training groups would have better results with strategy training.

More recently, Cubukcu (2008) instructed 130 third-year Turkish university students in awareness of reading comprehension strategies. In the study, explicit instruction of multiple monitoring strategies was given to the students. Instruction focused on 10 strategies such as inferring meaning, thinking about background knowledge, and re-reading the text, while students were engaged in reading texts using the Cognitive Academic Language Learning Approach (CALLA) (Chamot, 1995). CALLA is a cognitive approach that suggests ways in which teachers can guide students to develop a strategic approach to learning by asking them to reflect on their own learning. In the control group (n=65), the students took part in a 45-minute reading comprehension training session each week for 5 weeks. However, the experimental group (n=65) received similar training but learned why, when, and how to use the monitoring strategies. This group then used reading logs to record their cognitive processes while reading.
Results revealed that the systematic direct instruction in cognitive reading strategies developed reading comprehension. The logs revealed that students gradually started to think with heightened awareness about the strategies they could use.

One instructional study emerges from the literature that bears great relevance to this research as it clearly describes a pedagogical approach for strategy instruction. Zhang (2008) conducted a strategy instruction study of 99 Chinese adults, with a mean age of 18, studying in Singapore. They were divided into two groups: the control group (n=49) and the experimental group (n=50) and were taught by the same instructor in their academic reading courses. The study had two purposes. The first was to examine Chinese students’ attitudes to being directly taught reading strategies, as this would not normally be an aspect of their learning. The second purpose was to determine the effect of direct strategy training in a quasi-experimental design using control and experimental groups. Both groups used the same readings, but the experimental group was given a list of pre-reading, during reading and post-reading strategies that were discussed. Then, as instruction continued the instructor taught and modelled the strategies along with further discussion related to why they were important or how to use them. The reading component of the International English Language Testing System (IELTS) test was used for pre and post measures. Results indicated improvement in reading ability in the experimental group, which Zhang attributed to the intensive strategy instruction.

In his study, Zhang gave a useful description of the pedagogical reasoning behind strategies and how the teacher implements them in the classroom. Table 1 describes the pedagogical focus and the teacher’s role. He argued the need for teacher knowledge of strategy use in order to be able to directly tell students the reasoning behind the strategy and to be able to demonstrate it. The table summarizes the rationale behind strategy use such as defining the
strategy, explaining why, how, when and where it should be used. The final aspect is to raise awareness of evaluating the success of the strategy.

Table 1  
*Principles and Procedures in Strategy Instruction (Zhang, 2008).*

<table>
<thead>
<tr>
<th>Pedagogical focus</th>
<th>Teacher roles and classroom procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>What was the strategy?</td>
<td>Teacher described critical, known features of the strategy and provided a definition of the strategy</td>
</tr>
<tr>
<td>Why should a strategy be learned?</td>
<td>Teacher told the students why they were learning about the strategy by explaining the purpose of the reading strategy instruction component and its potential benefits for their self-regulated learning</td>
</tr>
<tr>
<td>How was the strategy used?</td>
<td>Teacher broke down the strategy, explaining each component of the strategy as clearly and articulately as possible and showed logical relationships among the various components</td>
</tr>
<tr>
<td>When should the strategy be used?</td>
<td>Teacher illustrated the use of the strategy with reference to particular text types</td>
</tr>
<tr>
<td>Where should the strategy be used?</td>
<td>Teacher showed examples of when the strategy should be used after describing appropriate circumstances under which the strategy would benefit reading comprehension</td>
</tr>
<tr>
<td>How should the use of the strategy be evaluated?</td>
<td>Teacher demonstrated how to evaluate the successful or unsuccessful use of the strategy with suggestions for fix up strategies to solve remaining problems.</td>
</tr>
</tbody>
</table>

Zhang’s principles of strategy training carry great importance for this study as they highlight that successful strategy instruction is teacher-dependent and this directly relates to my research question regarding teaching cognitive strategies and how they relate to student learning. While Zhang’s study was focused on reading strategies, the connections between reading and writing are strong whether it is in a teaching or learning situation. Indeed, given the strong connections between reading and writing, the application of these principles for teaching strategies would likely prove effective in the teaching of the two skills together.
Overall, this section has revealed that researchers agree that direct strategy training (Zhang, 2008, Cubukcu, 2008) enhances student reading comprehension abilities. However, some researchers caution that the training requires a significant time commitment and is complex for a teacher to implement, as it is time-consuming and affected by other variables such as clarity of teaching and student engagement (Grabe, 1991, 2009; Salataci & Akyel, 2002). Despite the drawbacks of time, Grabe (2009) argued that explicit training develops student awareness by having the teacher model the strategy, having the students practice it and evaluate its use and then finally use it autonomously in other tasks.

**Review of writing strategy and learner development studies**

This section reviews descriptive studies and instructional studies in writing. Grabe and Kaplan (1996) noted good writing entails adopting certain problem-solving strategies, including thinking at the micro level (sentence level) and the macro level (discourse level). Micro level problems are related to linguistic knowledge lexical access, orthography, cohesive devices and syntax. Cumming (2001) described these as the decision-making strategies. For the inexpert writer, Chenoweth and Hayes (2001) illustrated the process of micro level writing as a series of short bursts as the learner struggles to find words or grammar. However, their research showed that “increased linguistic experience is associated with an increase in burst length, a decrease in the frequency of revision, and an increase in the number of words that are accepted and written down” (p. 93).

Another reason that novice writers may struggle in short bursts at the micro level of writing is due to language switching. Woodall (2002) in his study of an L2 writer, Lisa, commented that individual differences affect language switching. Lisa was a novice writer who found that she was hampered and tired by the effort of switching, as it taxes working memory. For the emerging writer, there is a threshold where language skill hinders the writing process.
Without adequate lexical resource, the writer is compromised and expends great energy not only thinking about writing structure but also contemplating the choice of words by thinking in L1 and then writing in short bursts of the second language.

Macro level strategies include the process of planning, drafting and revising. Sasaki’s (2000) longitudinal study demonstrates how exposure to academic writing processes, feedback and plentiful practice improved writing fluency and confidence in the ability to write. A skilled writer will spend more time in the planning stages and revising at the discourse level; however, the unskilled writer will plan less and possibly revise at the word level (Chenoweth & Hayes, 2001). Furthermore, Cumming (2001) pointed out that writing skill is related to writing proficiency in the first language so that unskilled L1 writers may not have effective composing strategies.

However, in a study of 8 ESL students, four of whom were in remedial classes and 4 were in non-remedial classes, Raimes (1994) found that strategies employed by L2 learners are the same as those used by L1 learners with little time spent on pre-writing. Think-aloud protocols showed that remedial writers spent time rehearsing or searching for correct language and spent less time editing. The non-remedial students were more proficient at re-reading, revising and editing. Raimes called for “instruction and practice with strategies: how to deal with the text of the question and their own emerging text, how to generate ideas on a topic, how to rehearse ideas...how to rescan their texts...to revise and edit more efficiently” (p.163). Raimes pointed out that learners have internalized strategies from L1 experience but need direction in how to be less “haphazard” (p.163) in how they employ them.

In L2 research, Hyland (2003) also called for scaffolded instruction as “the main idea underlying this approach is that novice L2 learners are likely to acquire greater support” (p.137). Hyland noted this support is essential to building student understanding of how writing contexts
may differ culturally and to building a complete understanding of the writing process. He called
the stages of raising awareness as the “modelling and deconstruction” (p. 138) phases whereby
the teacher analyses the how and the why of the task. In the ‘independent construction phase”
(p.139), learners work alone as the teacher removes the scaffold only to intervene as facilitator.

**Review of studies of strategy instruction in writing**

This sections reviews studies in writing instruction. A meta-analysis of L1 strategy
instructional studies by De la Paz (2007) revealed the success of intervention research over the
last thirty years as being very well documented. However, the researcher found that teachers
seem to prefer not to directly teach strategies, as it is time-consuming. She noted strategy
instruction includes five aspects whereby the teacher thinks-aloud while demonstrating the
strategy, scaffolds the instruction, has students work collaboratively and then independently, and
transfers strategy use from teacher to student. De la Paz’s (2007) analysis sought to determine
which aspects of strategy instruction were most useful. She found a limited number of studies
specifically describing strategy instruction and focused on the 12 studies meeting her criteria of
teachers demonstrating the strategy for two consecutive days of instruction and having
subsequent independent practice. In general, the analysis revealed that just raising awareness and
discussing a strategy had a lesser impact on student development than specific teacher modelling
followed by collaborative and independent practice. However, she found most instructional
studies actually focused on students’ self-regulation strategies, and few studies examined the
specific effects of the actual explicit teaching and modelling on student learning. She concluded
that it is necessary for researchers to investigate the specific components of strategy training in
order to inform teachers in their practices.

In a L1 meta-analysis of 123 instructional studies of adolescent writers, Graham and
Perrin (2007) analysed quantitative results and determined that direct strategy instruction has an
effect on student writing. A study was considered to have implemented direct strategy instruction if the “students had to be shown how to use the strategy (i.e., modelling), (b) there were at least 3 or more days of instruction, and (c) instruction progressed toward students’ independent use of the strategy” (p.450). The authors concluded that direct strategy training was very effective in specific areas: planning, revising, grammar and summarizing. Furthermore, it was recommended that collaboration be used during strategy training as this built confidence and reinforced the teaching. Setting goals was an important aspect of strategy instruction, as was assessing the success of the goals. Two other findings were that training students in critical reading skills improved writing tasks, and that students benefited from being explicitly shown model writing tasks. The authors also concluded that professional development is essential to train teachers how to implement strategies in the process approach of writing.

In an L2 class, Shi (1998) investigated the value of pre-writing discussion in composition. Forty-seven students wrote 3 different essays under three conditions: no discussion, teacher-led discussion and peer discussion. Analysis of the essays found no statistical difference among the three conditions. Nevertheless, while students wrote longer drafts with no discussion, Shi found that teacher-led discussion helped conceptualize the content and peer discussion facilitated the use of vocabulary especially with verb use. She noted that “teachers-led discussions were carefully organized so that considerations of what to write were presented in the form of suggestions on how to write” (p.335) and that teachers carefully scaffolded vocabulary into the pre-writing discussion.

In another study, Ozaki (2003) investigated implicit and explicit writing training with 3 groups of Japanese learners: the explicit group (n =34), the implicit group (n=15) and the control group (n=30). Strategy training focused on rhetorical and organizational features of L2 expository writing and persuasive writing. Results revealed that the explicit group outperformed
at the strategy awareness level and at the writing production level thereby implying that intensive training develops writing proficiency.

The studies reviewed above provide a brief overview within a significantly rich body of literature related to writing instruction research. Some studies investigated preparing teachers for implementing scaffolded awareness-raising teaching into the classroom (Belcher & Braine, 1995; Carson & Leki, 1993; Ferris & Hedgecock, 1998; Leki, 1992; Zamel & Spack, 1998). Other studies focus on the learner and examine ongoing thinking, decision-making or problem-solving strategies during the composing process and how learners regulate these strategies (Cumming, 1989; Raimes, 1994; Sasaki, 2000). Overall, few studies observe the how the instruction is implemented and its impact on the cognitive processes of writing (Cumming, 1995).

**Studies of cognitive strategies in academic literacy**

Since the focus on this study is the connection between reading and writing, this section reviews studies that connect reading and writing cognitive strategies. Spack’s (1997) longitudinal study of Yuko is perhaps the most extensive study of academic literacy. Spack followed Yuko through three years of college in the United States. Yuko struggled with reading and assignments in her courses due to the amount of reading, and she did not understand how to approach assignments. Over time and after a number of unsuccessful assignments, Yuko learned that using strategies of writing in a journal while reading helped her clarify content and helped her learn about her L2 writing. Hirvela (2011) pointed out that the importance of this study to L2 research is that it shows that writing is not just a learned skill but that it develops over time and this has important pedagogical implications for instruction.

In writing-to-learn research, another single case study was Ming (Smoke, 1994). This too was longitudinal, taking place over 6 years, and followed Ming through courses other than ESL writing classes. Initially, Ming had failed her reading and ESL writing courses a number of
times; plus, she had difficulties with her major, accounting. She was advised to change to education and sociology, and she benefited from this, as she was required to read and write in her courses. Smoke collected examples of Ming’s writing in the 6 years, and conducted interviews with her. Smoke found that over time Ming realised the importance of writing when she took an advanced ESL course that was linked to a social science course. She began to synthesise ideas, write multiple drafts, keep journals of ideas, and seek editing help from peers and instructors. However, a turning point for Ming was an assignment in which she summarized an article only to discover that she was supposed to have written a critique. Not knowing what a critique was, she sought information about critique writing. She began a long process of academic research, synthesis, discussion of articles based on others’ criticism and expressing her opinions and wrote a very successful paper. Smoke pointed out that Ming’s success came from the realization that writing could help her learn through reading, writing and critically thinking at the same time.

Not all writing-to-learn studies are single cases of learners whereby language is found to improve when the learner successfully connects reading and writing after experiencing a certain amount of difficulty (Smoke, 1994; Spack, 1997). Rather, other studies investigated larger groups, including those of Sternglass (1997) and Leki (2007), also concluded that writing to learn occurs slowly, and, not all participants adapted as factors such as culture, prior learning, and personality have an effect on learning. Alwi, Adams and Newton (2012) described writing-to-learn as mediating thought and allowing thoughts to have greater permanence than if the strategy is produced orally.

In a more recent study, Pornpibol (2002) conducted a writing-to-read study with 15 Thai students in a university reading class. Through examining student writing and student logs about using writing when reading, results showed that writing about reading increased student awareness of gaps in knowledge. The logs revealed that students engaged in strategies of
evaluating, reviewing, and rewriting. Learners developed a strategic awareness of language forms as they wrote before and after reading, which enhanced their reading comprehension. Pornpibol posited that writing about texts promotes L2 learning (writing-to-learn), but noted that the study was based specifically on student perception and calls for further longitudinal research that investigates strategy training.

One important longitudinal study by Olson and Land (2007) highlighted how 55 middle and secondary school teachers implemented a cognitive strategy approach to reading and writing. Approximately 2000 students each year were taught the cognitive strategies used by expert readers and writers. Ninety percent of the students were ELL’s (Chicano/Latino) at intermediate levels of fluency. The goal of this longitudinal project was to build academic literacy expertise by providing students with the declarative, procedural and conditional knowledge of cognitive strategies, and to have extensive practice so that students could integrate into the academic environment in colleges and universities.

In the study, Olson created a ‘tool kit’ of cognitive strategies used by expert readers and writers. This tool kit’s main categories were planning and goal setting, tapping prior knowledge, asking questions and making predictions, constructing the gist, monitoring, revising meaning: reconstructing the draft, reflecting and relating, and evaluating (p.277). Teachers were given the tool kit and attended workshops for cognitive training so that the learning was scaffolded from the workshop to the teachers allowing them to use the strategies independently in their own classrooms. Part of the training included Think-Aloud workshops, and teachers were encouraged to collaborate between classes and schools. In order to assist the students with the strategy training a simplified tool kit was created.

Furthermore, students had a list of Cognitive Strategies Sentence Starters. For each main category in the tool kit, students were given sentence starters as guidelines to help with
developing the declarative, procedural and conditional knowledge. For example, Summarizing: “the key information is…” Clarifying: “To understand better, I need to know more about______” and Evaluating: “I like/don’t like ____ because ______” (p.280). The authors noted that strategies were not taught in isolation but rather as a series of comprehension strategies. The approach to teaching the strategies was transactional – involving the students– rather than telling them and students were asked to reflect upon or verbalise the strategies they had used. Another successful strategy tool was colour coding as learners used colours to determine whether they had simply retold a story or had employed critical thinking when they were writing. This strategy would be useful in determining student development of students’ knowledge telling to students’ knowledge transforming as they become expert readers and writers (Bereiter & Scardamalia, 1987). Olson and Land’s (2007) results showed positive outcomes for the experimental group when their standardised test scores were compared to students who had not been part of the study. Olson and Land’s research bears great relevance to this study in that the cognitive strategies employed by experts were explicitly taught.

**Summary of Literature Review**

This literature review focused initially on classroom-based studies of what teachers do when implementing strategy instruction (Cumming, 1995; Pressley et al., 2001) in order to establish a framework of cognitive modelling for this research. Pressley et al. (2001) called for teaching to be ‘opportunistic’ where teachers seize every opportunity to model a strategy. Then, academic literacy was reviewed (Grabe & Zhang, 2013) and connections between reading and writing were made (Hirvela, 2004) with a focus on the reading-to-write construct. Next, cognition was reviewed, first from the historical perspective of metacognition (Flavell, 1987) followed by more contemporary approaches to cognition (Dörnyei and Scott, 1997). A brief overview of reading theory included Pressley and Afflerbach’s (1995) and Grabe’s (2009) strategies for constructing
meaning. Zhang’s (2008) classroom study, the Principles and Procedures in Strategy Instruction gave suggestions on how strategies can be explicitly and methodically taught.

Writing theory was briefly reviewed from an historical perspective and the focus was on Hayes’ (2012) current view of the composing process. Bereiter and Scardamalia’s (1987) knowledge telling/knowledge transforming construct was reviewed as relevant to this study because it suggests that expert knowledge can be modelled and shared with novices as an instructional tool. Grabe and Kaplan (1996) offered a taxonomy of executive control writing strategies. Then, from empirical research, descriptive and instructional studies on reading, writing, and academic literacy were reviewed. The literature reviewed shows that teaching can and does impact learning. Teachers that model cognitive strategies in the manner of reading/writing experts are able to scaffold learning for their students. The literature also suggested that reading and writing skills should be taught together, as one skill informs the other either in a reading-to-write, writing-to-read or a writing-to-learn relationship. Hirvela (2004) called for every opportunity to be seized to model and scaffold learning in the integrated reading-writing classroom.

As described in the review there is a paucity of research related to what teachers actually do in the classroom as many strategy studies consider the students’ perceptions of either strategy training or perceptions of strategy use while engaged in a task. The literature reveals a gap in classroom-based research examining what the teacher actually does in the class to raise cognitive awareness, how it occurs and what impact it has on learner development. The research questions in this study seek to investigate not only student and teacher perceptions of cognition, but also to explore the link between the actual teaching of cognitive strategies and writing development. By conducting this research, further insights into the thinking processes of teachers and those of learners when engaged in reading to writing tasks may be revealed.
CHAPTER 3

METHODOLOGY

This chapter describes the methodology and procedures I used to collect and analyse data for this thesis. The chapter begins with a rationale for choosing the case study approach to research, followed by a description of the research context, the participants, including the procedures to solicit their involvement, the different data types collected, and methods of analysis. The chapter concludes by considering the validity and limitations of the study.

For this research, a case study strategy seemed appropriate to meet the goal of investigating how the instruction of reading-to-write cognitive strategies related to learning in one EAP course. While case study research has become widespread among researchers, various definitions and approaches to case studies have led to researchers questioning case study credibility as a rigorous methodology. Merriam (1998) stated that a case study’s main characteristic “lies in delimiting the object of study: the case” (p.27), which is identified for a particular reason and is heuristic with multiple sources of data. Simons (2008) described a case study as the “process of conducting systematic, critical enquiry into a phenomenon of choice and generating understanding to contribute to cumulative public knowledge of the subject” (p.18). Similarly, Stake (1995) described a case study as “the particularity and complexity of a single case” (p.ix); thus, it is the singularity of the phenomenon that creates the case, which requires multiple data sources where the researcher “emphasizes episodes of nuance” (p. xii). Yin (1994) agreed that a case study investigates a real-life context, but that it is not the object that defines the case; rather, it is having “prior development of theoretical proposition to guide the collection of data” (p.13). Yin (2005) also suggested that choosing to conduct case study research is appropriate “when ‘how’ or ‘why’ questions are being posed, when the investigator has little
control over events, and when the focus is on contemporary phenomenon within some real-life context” (p.1). Meyer (2001) also claimed that a strong theoretical framework could add to the rigour of a case study. Adding to the criteria of determining if a case study is rigorous, Yin (2005) suggested that inquiry could begin with gathering statistics, which provide valuable data, but the research in education is intended to “bring to life what goes on [in a classroom] …Case studies fill this need. They can provide both descriptive richness and analytic insight into people, events and passions as played out in real life environments” (p. xiv). Finally, a recent definition of case study research stated that it “explores a real-life contemporary bounded system (a case)...over time, through detailed, in-depth data collection involving multiple sources of information...and reports a case description and case themes” (Creswell, 2013, p.97). Hyett, Kenny, and Dickson-Swift (2014) provide a checklist of criteria of key characteristics that are essential for case study methodology, which they based on Merriam (2009), Stake (1995), and Creswell (2013). These include a definition of the case, a sense of story and vicarious experience through vignettes, multiple data sources, triangulation of data, a clear role of the researcher, rich heuristic description, awareness of personal bias, and an appropriate study design.

Accordingly, this research in an EAP course can be defined as a single instrumental case study within which the teacher and the students are the participants as the study seeks to answer research questions based on the theory of cognitive strategies and teaching and learning. Thus, this case study provides a systematic way of looking at events that occurred in the class with the teacher and the students by closely examining “detailed accounts of the processes, outcomes and factors associated with language learning” (Duff, 2008, p.35) in the specific context of a university classroom. The study provides vignettes and rich description to engage the reader. Furthermore, various methods of collecting the data give a rich, contextualized analysis to
maximize the depth of understanding of teaching cognitive strategies in reading-to-write development. Data collection strategies include teacher observations and field notes, teacher interviews, focal student stimulated recalls, focal student interviews and two class surveys. Different strategies were used to address different research questions, which are described below.

The main research question was “How do cognitive strategies in an EAP reading-to-write course at a Canadian university occur and then relate to perceptions of students’ performance in writing tasks for the course?” Table 2 summarizes the research questions, the data collection instruments, and the methods of data analysis that sought to answer the main research question.

Table 2
Research Questions, Data Collection Instruments, and Methods of Analysis

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Data collection instruments</th>
<th>Methods of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) How are reading-to-write cognitive strategies taught in the one EAP reading-to-write course?</td>
<td>Field notes based on observation of teacher Pre-term interview Mid-term interview Final interview</td>
<td>Transcribed and coded thematically</td>
</tr>
<tr>
<td>b) In what ways does the teacher perceive teaching reading-to-write cognitive strategies as linking to students’ writing improvement?</td>
<td>Pre-term interview Mid-term interview Final interview</td>
<td>Transcribed and coded thematically</td>
</tr>
<tr>
<td>c) In what ways does the teacher perceive teaching reading-to-write cognitive strategies as linking to students’ writing improvement</td>
<td>Stimulated recalls Pre- and post-surveys</td>
<td>Transcribed and coded Tabulated</td>
</tr>
<tr>
<td>d) In what ways do the students perceive reading-to-write cognitive strategies as being helpful when engaged in these tasks?</td>
<td>Post-course survey Post-course interview</td>
<td>Tabulated Transcribed and themed</td>
</tr>
</tbody>
</table>

These data provide multiple layers of analysis that offer a ‘thick’ understanding and add a depth to the analysis in order to create an understanding of events in the classroom (Duff, 2008).
Since I attended every class and observed the events, the students became familiar with me. Merriam (1998) would describe that this stance as a researcher participant as I had some social interaction with the students but had no input into their learning, nor did I participate in the class activities. This study is also built on a theoretical framework to guide it (Yin, 1994). Furthermore, I bring my many years of experience of being both a writing instructor and a teacher educator to the study in order to conduct an in-depth analysis of the data. Yin (1994) called for the researcher to analyse the data by being able to use prior expert knowledge.

**The research context**

This study took place in a medium sized university in Canada, to which I have given the pseudonym South West University (SWU). This university has approximately 39,000 students on the main campus and 9,000 students over two smaller campuses. SWU has a large international student population and approximately 25% of the student population speaks English as an additional language. SWU has a number of affiliated colleges on campus, one of which, J. W. University College, (a pseudonym) offering various degrees, is the centre of English language instruction for ELLs at South West University.

J. W. University College offers both non-credit and credit ESL programs. The non-credit program is for students preparing to enter undergraduate or graduate studies at SWU. The credit courses are open to all SWU undergraduate and graduate students for whom English is an additional language. ESL credit courses are one semester in duration and include courses in grammar, presentation skills, and writing. They offer 0.5 credits towards a degree, which usually requires 20 full credits.

In order to find a class in which to conduct the research, I met with the Assistant Director of the credit ESL department and briefly detailed the nature of the planned research. I requested a course that had both reading and writing as essential elements of the syllabus. It was at the
Assistant Director’s suggestion that this case study take place in a general writing course with a teacher who had a number of years teaching experience. ENGLISH 9001 is open only to additional language learners. In order to take this course, students need departmental consent to verify they are language learners who need to improve their writing skills.

**Piloting the study**

In preparation for the main study and to test the data collection instruments, I conducted a pilot study in an EAP class at a different institution, a community college. The class was an advanced level reading and writing class and had 19 students. I developed the Teaching Episode Observation Protocol (See Appendix E), which had been adapted from Zhang’s (2008) *Principles and procedures in strategy instruction* (See Table 1) and tested the instrument in this class.

I attended four successive two-hour sessions of the EAP class and observed the teacher. The initial goal had been to record teaching episodes onto the Teaching Episode Observation Protocol while in the classroom and then to transcribe them after the class; however, I quickly found that the protocol was cumbersome as I could not accurately record the teacher talk and missed some of the classroom interaction while recording data. In the second session, I wrote field notes and immediately transferred them into the protocol after the class. This proved to be equally as cumbersome as the teacher talk was extensive and often included long utterances, which were difficult to ‘fit’ into the protocol. In the third session, I abandoned the protocol and found that taking field notes of teacher talk in a notebook proved to be the best method. I was able to capture the essence of the teaching through the teacher talk, while at the same time writing reflective comments or questions. After the session, I was able to easily transcribe the teacher talk to a computer file and to colour code it to easily identify episodes of strategy training. I employed this method in the fourth class and was satisfied with the results and
continued with this method of recording data in the main study. After the pilot study, I realised I needed to develop an instrument that was more detailed than Zhang’s (2008) procedures for effective data analysis. *A Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning* was developed (See Table 3 on page 69 with its subsequent description).

**Recruiting the Participants**

The following sections briefly describe how participants were recruited and the processes used to obtain consent to participate in the study.

**The instructor**

Once J.W. College had made the suggestion to conduct this study in ENGLISH 9001, I met with the instructor, Sophia, (a pseudonym), to describe the role I would play as an observer in the classroom and to have her sign the consent forms (See Appendix A). I explained that I would not be participating in any teaching in this course and would only be observing all classes. I further explained that I would invite the entire class (25 students) to be part of the study, but that I also sought to recruit 6 to 9 focal participants. I described how after these focal participants had written the course assignments, I would ask them to retrospectively think through the writing process while reading their essays aloud.

**Class participants**

After receiving administrative and instructor consent to carry out the study, I began to recruit participants. At the end of the first class, Sophia left 15 minutes early, and I invited the students to participate in the study. I spoke to the students using a scripted verbal recruitment text (See Appendix B) and explained the study and what it would entail for them. I described that there were two options for participation either as a class participant or as a focal student. I took about 15 minutes to explain the study and what they could expect in return at the end of the study (e.g. confidentiality plus a book store gift card for focal students and a coffee shop gift card
for class participants). I handed out information letters and consent forms (See Appendix C) and asked potential participants to indicate whether they were interested in taking part in the study and if they were also interested in being a focal participant (See Appendix D). The entire class agreed to participate, and 6 students agreed to be focal participants. Since the signing of the consent forms required a witness, I had invited an instructor from the non-credit ESL program to be present as students signed their consent forms.

**Focal participants**

Having 4-6 focal participants rather than a single participant has advantages as it brings variation and a different level of representation to the study (Duff, 2008). The self-selected 6 focal students include four men and two women from varied backgrounds: Asian, European and Middle Eastern. Patton (1990) would describe this as “maximum variation sampling.” For small samples, a great deal of heterogeneity can be problematic because individual cases differ from each other. Patton noted the maximum variation sampling strategy can turn that apparent weakness into strength by applying the following logic: “Any common patterns that emerge from great variation are of particular interest and value in capturing the core experiences and central, shared aspects” (p.172).

Once the 6 focal students had signed the consent forms, I arranged to meet them after the following class. We met for approximately 15 minutes in the library, and I further explained their role in the study and answered their questions. I reiterated that they would receive some training on how to think aloud about the writing process, the number of times that we would meet and for how long. I also explained that they would also have a final interview with me at the end of term, at which time they would receive their bookstore gift certificate.
Data Collection Methods and Data Collection Instrument Overview

In this case study, multiple perspectives and multiple sources of data provide a deep understanding of the role of cognition in teaching and learning. The primary source of data for this study is based on teaching observations. This course was held three times a week for a total of 5 and a half hours and ran 10 weeks for a total of 55 hours. I attended 25 of the 30 sessions, missing the classes when students wrote grammar tests (Weeks 5 and 10), and the midterm exam (Week 5). I also missed one assignment day as I was attending a conference at that time. Furthermore, on the final day of the course no data was collected as the instructor conducted final progress interviews with students. I used this day to conduct final interviews with the focal participants and the instructor. In total, I observed 45 hours of classes.

Over the 10 weeks, five types of data were collected: teacher interviews, initial and final class questionnaires, retrospective stimulated recall think-aloud protocols, focal student interviews, and extensive field notes of teacher observations. These multiple sources of data helped to reduce bias that may result from using a single source of data. Table 3 provides an overview of when the data collection instruments were used. Detailed descriptions of the data collection instruments can be found in the following section.

Table 3
Overview and TimeLine of Data Collection Instruments

<table>
<thead>
<tr>
<th>Week</th>
<th>Tuesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before the course began</td>
<td>Observations/field notes Participants recruited and consent forms are signed</td>
<td>Observations/ field notes Initial class questionnaire</td>
<td>Initial teacher interview</td>
</tr>
<tr>
<td>1</td>
<td>Observations/field notes</td>
<td>Observations/field notes Met with focal students to explain role in the study.</td>
<td>Observations/field notes Met with focal students to explain role in the study.</td>
</tr>
<tr>
<td>2</td>
<td>Observations/field notes</td>
<td>Observations/field notes Train focal students in stimulated think-aloud protocols</td>
<td>Observations/field notes Train focal students in stimulated think-aloud protocols</td>
</tr>
<tr>
<td>3</td>
<td>Observations/field notes</td>
<td>Observations/field notes Think-aloud protocols for Contrast essays draft 1</td>
<td>Observations/field notes Think-aloud protocols for Contrast essays draft 1</td>
</tr>
<tr>
<td>Week</td>
<td>Tuesday</td>
<td>Thursday</td>
<td>Friday</td>
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<td>------</td>
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<td>----------------------------------------------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>4</td>
<td>Observations/field notes</td>
<td>Observations/field notes</td>
<td>Think-aloud protocols for Contrast essays draft 2.</td>
</tr>
<tr>
<td>5</td>
<td>Observations/field notes Midterm teacher interview</td>
<td>Did not attend as class wrote a Grammar Test</td>
<td>Did not attend class as class wrote a midterm essay exam</td>
</tr>
<tr>
<td>6</td>
<td>Observations/field notes</td>
<td>Observations/field notes</td>
<td>Think-aloud protocols for Paraphrasing Assignment</td>
</tr>
<tr>
<td>7</td>
<td>Observations/field notes</td>
<td>Observations/field notes</td>
<td>Think-aloud protocols for Summary Assignment</td>
</tr>
<tr>
<td>8</td>
<td>Observations/field notes</td>
<td>Observations/field notes</td>
<td>Think-aloud protocols for Argument Essay</td>
</tr>
<tr>
<td>9</td>
<td>Observations/field notes</td>
<td>Observations/field notes</td>
<td>Conference – no data collection for draft 2 of Argument Essay</td>
</tr>
<tr>
<td>10</td>
<td>Observations/field notes</td>
<td>Did not attend as class wrote final grammar test</td>
<td>Final teacher and focal student open-ended question interviews.</td>
</tr>
</tbody>
</table>

**Observations and field notes**

I attended 25 of the 30 class sessions, missing only the aforementioned classes for a total of 45 hours of observations. Each observation session lasted the entire class during which I sat at the side of the class and made notes of all instructional activities. I wrote down as much of the ‘teacher talk’ as possible as well as the notes the instructor put on the board. The teacher talk I recorded was related to teaching activities where the focus was on writing, grammar, reading, or general success tips or strategies. No notes were taken when the teacher set up pair or group work activities and offered additional help to groups or to individuals. Also excluded from these data is teacher talk related to class announcements such as exam dates and what to bring to class.

The instructor gave me a copy of the course text, all course handouts prepared for students as well as many of the overheads and other instructional materials. The field notes that I wrote were very detailed as well as reflective. After every class, I added further reflections to the notes. A sample of the field notes can be found in Appendix F.
**Instructor interviews**

The three interviews conducted with the instructor were recorded and transcribed. A few days before the course started, I conducted the initial informational interview with Sophia (See Appendix G). The first questions related to her teaching background. Other questions related to the course and her attitudes towards teaching reading and writing.

At the midway point in the semester, I met with Sophia again for another semi-structured interview. This time the questions were based on observations of the first 5 weeks of teaching. I had looked at the field notes documenting classroom teaching activities and asked Sophia about the activities or specific teacher talk (See Appendix H). For example, “In class I heard you mention that ‘reading informs your writing.’ Can you comment on that?” Some questions were related to vocabulary teaching: “I noticed you are giving clues to the vocabulary they can use. You did this in both the personal branding and comparative medicine essays. How much evidence of this vocabulary do you see of this in student writing?” All questions were structured so that the teacher could expand upon them. Other questions related to the actual process of teaching such as “A few times when you were talking about parallel structure and sentence variety, I heard you say ‘Why did you do this? You need to think why. You need to understand how you do this.’ Can you comment on this?” Other questions focused on her perception of student development in writing and reading. I also asked if she planned to modify her teaching in the second half of the semester.

The final interview was also semi-structured and focused on Sophia’s perceptions of her teaching strategies (See Appendix I). For example, “Now that the course is over, what do you perceive as the most effective strategies you taught?” Other questions related to specific teaching episodes in the class and how she perceived their helping reading and writing development. Other aspects I asked her to reflect on were vocabulary building strategies, synthesising material,
paraphrasing, and margin notes. I also asked her opinion of reading and writing strategies and their relationship to writing development.

**Student questionnaires**

On the second day of class, towards the end of the session, the instructor left early, and I administered the background questionnaire to all the students including the 6 focal students. Questions included nationality, language background, field of study, time in Canada, previous ESL class experience as well as student perceptions of issues with reading and writing (See Appendix J). These questionnaires took the students approximately 10 minutes to complete. All students were asked to choose pseudonyms, which are used in this thesis.

On the last day of class, all students were invited to complete the final questionnaire (See Appendix K). The questionnaire was distributed after the instructor had left the classroom, and it took the students approximately 15 minutes to complete. Questions focused on what they had learned in the course through specific class activities, which were the same as those I had questioned Sophia about in her final interview. Students were asked how they perceived these activities had helped them in writing the in-class essays. Types of activities included 1) practicing parallel structure; 2) practicing paraphrasing to techniques, 3) practicing vocabulary building strategies and 4) having class discussions about the reading topics. The questions were in chart form and students could choose from “Really helped me a lot,” “Helped me some of the time,” “Didn’t help me much,” and “Didn’t help me at all.” Students were then asked to describe how the activities may have helped. The remainder of the questions were open-ended and asked specifically about strategies used during reading and writing. Questions included “What writing strategies do you find most useful? Why?” Conversely, “What writing strategies do you find least helpful? Why?” Similar questions were asked about reading as well as any specific strategy the instructor had taught that was new for the students. The final question focused on students’
perceptions of what had improved the most in their writing. The responses for the closed questions were counted, while the responses to the open-ended questions were transcribed including the students’ written errors.

**Focal student retrospective stimulated recall think-aloud protocol data**

The 6 focal students completed one practice and five retrospective stimulated recall think-aloud protocols after writing the assignments. Each participant read their essay aloud for approximately 10-12 minutes and described their thinking process while writing. Swain (2006) provides a strong argument for verbal protocols as “think alouds and stimulated recalls should be understood as part of the learning process” (p. 110). Verbal reporting entails gathering participant reports of how they problem-solved a task. However, Ericsson and Simon (1993) pointed out, delay between task and recall should not be lengthy, as recall is dependent on short term memory, thereby giving greater accuracy to the account. Ericsson and Simon suggested the think-aloud be conducted while doing the task. However, in this study, the ethical review has stipulated that since these were graded writing assignments, the students could not be asked to think aloud while they were writing as it could influence the final outcome of the assignments. Furthermore, for ethical reasons the instructor was not to know who the focal students were so that she was not influenced by that knowledge when marking. As a result, all verbal protocols were conducted immediately after the assignments were completed with no more than a one-hour delay.

The stimulated recall think-aloud training session was conducted with all 6 students together. First of all, I gave each student a different math problem such as $2(3+4) – 5(4+9) + 4(8-6) = X$, and asked them to describe the process of finding the solution to the problem out loud. They also practiced by describing an imaginary tour of a room in their home. They were asked to imagine walking into their room and describing it to us so that we could “see” it. The
final practice was with the second draft of their process essays on the topic of personal branding. Each student read aloud the first two paragraphs and experimented with the think-aloud process. No data were collected from this practice session.

When I conducted the five think-aloud sessions, I collected the entire class’s assignments as students completed them and put them into an envelope in order to protect the confidentiality of the students so that the instructor would not know whom I was interviewing. Interviews were conducted in a library study room, and the focal students took turns coming for their session. In order to create a sense of fairness, we had a rotation system, so that the person who came first came as the last participant the next time the think-aloud protocol was conducted. Before each session, I gave the students a schedule of times that were 15 minutes apart.

Participants were asked to read specific sections of the essay, which corresponded to the teaching focus of the week. For example, if the focus had been on the writing of introductions, then this is what they read and were asked to recall. In each session, participants were instructed to read one or two sentences at a time and to articulate anything they remembered from the writing process. I remained silent except for the occasional encouraging “Can you say more?” “How did you do that?” and “Can you show me the example?” See Appendix L for the instructions and the list of comments I used to stimulate the thinking process. Once the students completed the reading, I would ask one or two final questions. For example, “Is there anything you would like to say about the task?” Each think-aloud session was recorded.

Once the sessions were complete, I photocopied the essays so that I could look at them as I transcribed the student think-aloud protocols. The essays were returned randomly to the envelope of class essays, which was placed in teacher’s mailbox in the photocopy room. As a result of the anonymity of the focal students, their work was not discussed with the instructor nor
was it analysed in terms of measurable improvement; rather, the students’ perceptions of their learning was the focus.

**Focal student interviews**

On the final day of the course, I met with each focal student for approximately 15 minutes and conducted a semi-structured interview (See Appendix M). Questions focused on how participants perceived their writing improvement and how they could relate this to classroom activities such as using vocabulary building strategies, practicing paraphrasing, and talking about the importance of editing strategies. The final questions focused on what participants still found difficult and what would be helpful in their future studies.

**A Framework for Data Analysis**

This section describes the development of an instrument for data analysis. In Chapter 2, a review of the relevant research established the foundation for the framework guiding this study and the analysis of findings. The main areas reviewed included pedagogical implications for teaching and scaffolding strategies (Pressley, 2002, Wilson & Bai, 2007), cognitive modelling (Cumming, 1995), reading and writing connections (Hirvela, 2004), cognitive reading strategies (Grabe, 2009, Pressley & Afflerbach, 1995), the principles and procedures in strategy instruction (Zhang, 2008) cognitive processing models of writing (Bereiter & Scardamalia, 1987; Hayes 2012) and a taxonomy of writing strategies (Grabe & Kaplan, 1996). The summation of these models and taxonomies form the theoretical background of this study.

From the literature, it has been determined that teachers can model the processes of an expert reader and writer by demonstrating these for students, by thinking aloud, and by practicing and scaffolding learning. Cumming (1995) highlighted cognitive modelling as being an effective means to demonstrate expert behaviour. Therefore, in order to guide this study, it
was essential to create a taxonomy that could be used in this study that describes the strategies that experts employ in the reading-to-write relationship so that data could be coded and analysed.

**The Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning**

The reading taxonomies of Grabe (2009), and Pressley and Afflerbach (1995), and a writing taxonomy of Grabe and Kaplan (1996) revealed variability in the strategies used by experts in both reading and writing. When developing the taxonomy, I considered pre, during and post comprehension reading strategies (Pressley & Afflerbach) and the types of strategies needed for writing both at the micro and macro levels. I also drew upon my many years as a teacher to consider the kinds of strategies or activities that occur in academic literacy classrooms. These cognitive strategies needed to be teachable and preferably observable suggesting that they could be modelled. Each strategy also needed to be able to be demonstrated or articulated by learners when writing or, in the case of this study, during a stimulated recall. Further, since the taxonomy was a ‘work in progress’ that evolved during the observations, I made adjustments according to the instructional activities demonstrated by Sophia in order to reflect what actually happened in the course.

Accordingly, a taxonomy was developed to guide this study to categorize cognitive strategies in teaching and learning. Table 4 depicts five main categories of cognitive strategies that control reading and writing: *Ideas and information; Language below sentence level: Vocabulary; Language below Sentence Level: Sentence grammar; Discourse: Language Use above the Single Clause;* and *Regulation of Reading and Writing Task Processing*. Each category lists potential cognitive strategy activities, all of which can be taught explicitly and learners can employ when negotiating reading and writing texts. Furthermore, in order to have clarity when I was coding the data, operational definitions of teaching and learning activities were added to the taxonomy. Some of the definitions are informed by my years of teaching writing, yet many
have roots in the main theories reviewed in this study. Other definitions are as a result of the actual classroom observations. For example, in the *Sentence Level Grammar* (3.1 - Raising awareness of parallel structure), the definition “Demonstrates/discusses how to create sentences with parallel structure either through analysing teacher generated sentences or editing student-generated sentences” was developed from observing the teacher employing the strategy. The following sections describe the strategies in each category and how they are rooted in the literature.
## A Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning

<table>
<thead>
<tr>
<th>Taxonomy of Reading and Writing Episodes</th>
<th>Focus on Teaching</th>
<th>Focus on Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 Ideas and Information</strong></td>
<td>Discusses /demonstrates/evaluates</td>
<td>Refers to / demonstrates/ focuses on</td>
</tr>
</tbody>
</table>
| 1.1 Activating previous topic knowledge | • a variety of ideas in order to help students think about the topic and knowledge around the topic before reading and/or writing  
• schema activation of ideas | • use of a variety of ideas in order to help to think about the topic and knowledge around the topic before reading and/or writing  
• schema activation of ideas |
| 1.2 Raising awareness of reading or listening for topic information | • the need to do class reading/listening files or do further reading in order to improve knowledge  
• how the reading informs the writing | • having done reading/listening files or do further reading to improve knowledge  
• how the reading informed the writing |
| 1.3 Raising awareness of thinking critically about or beyond the content in readings or listening files in order to build ideas for writing | • the ideas that are in the readings and/or expands to think critically beyond the reading  
• the synthesis of ideas in order to help provide content for writing | • the ideas that are in the readings and/or thinking critically beyond the reading  
• synthesis of ideas in order to help provide content for writing |
| **2 Language below Sentence Level: Vocabulary** | | |
| 2.1 Vocabulary: raising awareness of spelling knowledge | • strategies to improve spelling | • strategies to improve spelling |
| 2.2 Vocabulary: building use through collocations or synonyms. | • a variety of collocations or synonyms in order to build awareness of specific vocabulary | • using a variety of collocations or synonyms or specific vocabulary when writing |
| 2.3 Vocabulary: building awareness of appropriate academic vocabulary. | • academic vocabulary and its usage as opposed to slang or idiomatic usage. | • the need for academic vocabulary and its usage as opposed to slang or idiomatic usage. |
| 2.4 Vocabulary: building awareness of inferencing words in context, using word parts (morphology), or using explanation to determine word meaning. | • words in context in order to determine meaning.  
• morphemes (prefixes, suffixes and roots), inflections (how the word changes but no change in meaning) and derivations (changes in meaning by adding derivational morphemes)  
• explanation to build or determine meaning of vocabulary | • words in context in order to determine meaning.  
• morphemes (prefixes, suffixes and roots), inflections (how the word changes but no change in meaning) and derivations (changes in meaning by adding derivational morphemes)  
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<tbody>
<tr>
<td><strong>Definition of teacher-driven strategy training activities</strong></td>
<td><strong>Definition of student-driven strategies during stimulated recalls post writing class assignments</strong></td>
<td></td>
</tr>
</tbody>
</table>

3  **Language below Sentence Level: Sentence Grammar**

3.1 Sentence grammar: Raising awareness of parallel structure

- how to create sentences with parallel structure
- through analysing teacher-generated sentences or editing student-generated sentences
- the need for creating sentences with parallel structure
- use of teacher-generated sentences or edited student-generated sentences

3.1 Sentence grammar: Raising awareness of subordination and coordination

- how to create accurate sentences with subordination or coordination
- accurate sentence structure
- how to create accurate sentences with subordination or coordination
- accurate sentence structure

3.2 Sentence grammar: Raising awareness of article and determiner use; parts of speech

- the use of articles and determiners
- parts of speech
- the use of articles and determiners
- parts of speech

3.3 Sentence grammar: Raising awareness of the form and use of the passive voice

- how to create the passive or compares it to active voice
- use of the passive voice in academic writing
- the use of the passive or compares it to active voice
- use of the passive voice in academic writing

3.4 Sentence grammar: Raising awareness of other grammar and punctuation

- accurate use of other grammatical forms and punctuation
- accurate use of other grammatical forms and punctuation

4  **Discourse (Language Use above the Single Clause )**

4.1 Raising awareness of essay organization

- structure of essays (introduction, body and conclusion);
- a thesis statement
- structure of essays (introduction, body and conclusion)
- writing of thesis statements

4.2 Raising awareness of text organization(genre)

- the genre and how it is organized
- the genre and how it is organized

4.3 Raising awareness of paragraphing

- paragraph format
- paragraph format

4.4 Raising awareness of cohesion

- the importance of effective cohesion in a piece of writing either through cohesive devices or pronoun reference.
- the importance of effective cohesion in a piece of writing either through cohesive devices or pronoun reference.

5  **Regulation of Reading and Writing Task Processing**

5.1. Raising awareness of planning the task

- planning ideas or structure before writing by prewriting or completing outlines
- planning ideas or structure before writing by prewriting or completing outlines

5.2. Raising awareness of the importance of audience

- awareness of the reader in terms of content; clear writing to guide the reader
- having awareness of the reader in terms of content; clear writing to guide the reader

5.3 Raising awareness of revising/editing text for grammar and sentence errors.

- strategies of how to identify discrete errors and how to avoid making the same mistake.
- strategies of how to identify discrete errors and how to avoid making the same mistake.

5.4 Raising awareness of assessing ideas and structure.

- re-reading drafts of a written text in order to assess the ideas as related to content and genre; gives check lists to help assess structure.
- re-reading drafts the written text in order to assess the ideas as related to content and genre; uses check lists to help assess structure.

5.5 Raising awareness of summarizing/paraphrasing

- strategies for effective paraphrasing or summarizing
- for effective paraphrasing or summarizing
Ideas and Information
The first category is *Ideas and Information*, which in Pressley and Afflerbach’s (1995) framework, is pre-reading strategies. Strategies include thinking about the topic and activating previous topic knowledge. This could include thinking about previously read materials or even just general world knowledge. Grabe and Kaplan (1996) would describe this as the invention stage with idea generation through brainstorming and free writing. In making his connections between reading and writing, Hirvela (2004) posited good readers as well as good writers take the time to think about what they know about a topic. Hirvela suggested that teachers mine the texts for ideas as a means of generating content. This could also include writing to read such as making notes while reading, writing reflections, writing ideas to consult in other texts. Another aspect that Grabe and Zhang (2013) highlighted is that discussion raises awareness of text information and helps generate ideas for writing. Since the course text had accompanying sound files, I added critically thinking about topics in readings or sound files. Furthermore, Sophia often uploaded internet sound files expecting students to integrate content from readings and sound files into their writing assignments.

Language below Sentence Level: Vocabulary

The second category *Language below Sentence Level: Vocabulary* challenges learners in reading comprehension and in writing, as they may not have developed mastery of the depth of vocabulary knowledge (Hulstijn, 2001). Categories include spelling, using collocations, learning academic vocabulary, inferencing vocabulary including using word parts to determine meaning.

Different orthographic systems and the irregularity of spelling in English are problematic (Nation, 2001). Nation suggested a strategy training program to improve spelling that includes repeated practice, monitoring, and relating spoken form to written. Using collocations is essential for developing fluency, for “all collocational sequences are important and need to be encountered
many times” (Nation, 2001, p.324). Macqueen (2012) emphasised how the patterns of English (collocations or idioms) are frequently confused by ELL’s and miswritten such as ‘perform a project’ rather than ‘perform a task.’ She called for scaffolding of instruction to build the depth of knowledge.

Inferring words is an important strategy when encountering unknown words in a text. Fraser (1999) described three reading comprehension lexical processing strategies that readers can use when confronting an unfamiliar word during reading: ignoring a word and continuing to read, consulting a dictionary and inferring meaning based on linguistic knowledge or by using contextual cues. These strategies can be directly taught, and Fraser suggested that inference supported by consulting a dictionary to confirm meaning resulted in increased word retention. Hulstijn (2001) highlighted that vocabulary can be explicitly taught by rich, elaborate processing and rehearsal. Furthermore, examining the word morphology is considered an excellent strategy in vocabulary development (Schmitt, 2000). To Vocabulary strategies I added synonyms as Sophia focused on building a bank of synonyms as practice for paraphrasing. Another category resulting from classroom observations was the use of academic vocabulary and the avoidance of slang. The Academic Word List (AWL) (Coxhead, 1998) is useful for teaching and highlighting academic word choices.

**Language below Sentence Level: Sentence Grammar**

The next category is Language below Sentence Level: Sentence Grammar, which refers to the discrete points that teachers, readers, and writers attend to. As can be seen from Table 3, the strategies focus on below sentence level language aspects that range from the use of punctuation to focusing on sentence grammar within a clause. Most of these categories were informed by my teaching experiences of academic English classes and the required grammar. The categories focus on subordination/coordination, article use, and other grammar. Passive
voice was added as a result of the observations because Sophia taught it as a paraphrasing strategy. Similarly, parallel structure was added as result of practice in writing thesis statements and parallelism in contrastive structures. While these categories may seem essential skills in writing, Macqueen (2012) calls them emergent skills; accordingly, it is through repeated use in discourse that they develop. Pressley and Afflerbach (1995) also describe how readers need to have text-driven knowledge at the word and sentence level in order to employ reading strategies. Learners can use this discrete knowledge as a repair strategy in the comprehension process; for example, learners can inference words and be aware of how sentence grammar affects meaning.

**Discourse: Language Use above the Single Clause**

The fourth category in this taxonomy describes Discourse: Language Use above the Single Clause. Categories include awareness of essay and text organization paragraphing and cohesion. Pressley and Afflerbach (1995), Grabe (2009) and Grabe and Kaplan (1996) considered knowledge of genre and text organization as integral to both reading and writing. Having this knowledge helps the learner see the patterns in text organization and using this knowledge can lead to greater success in the task. Knowledge of cohesive devices and having knowledge of paragraphing is essential for creating meaning and understanding flow of ideas in both comprehending and composing a text. This same knowledge transfers to writing as the explicit models seen in the reading transfer to inform the knowledge of the writer (Hirvela, 2004).

**Regulation of Reading and Writing Task Processing**

The final category in this taxonomy is the Regulation of Reading and Writing Task Processing. These are the monitoring strategies that readers and writers employ and include planning the task, being aware of audience, revising a text, assessing ideas, summarizing and paraphrasing. Semantic maps or outlines of readings are effective strategies for readers to
visualize and organize the ideas of a reading (Carrell et al, 1989). Similarly, Grabe and Kaplan (1996) believe creating an outline and using notes is an effective aspect of the composing process. It is important to develop writers’ awareness of audience even though in composition classes the audience is the teacher, whose role is important yet may not be considered a real audience. Learners can be taught strategies to think who would be the intended audience and what information would be necessary to portray (Andrade & Evans, 2013). The revision process is another important aspect of writing. The operational definition for editing was derived from the class practices of Sophia using student work to improve the density of errors.

Summarizing and paraphrasing are considered reading strategies that are a comprehension check; they are also skilled writing activities in reading-to-write classes that require monitoring strategies and evaluation of the task’s success. In Bereiter and Scardamalia’s (1987) construct, summarizing and paraphrasing are knowledge telling activities, while knowledge transforming suggests that the expert writer is able to process and transform complex knowledge when synthesising readings and writing critically. In the Grabe’s (2009) taxonomy, regulation includes text-driven strategies or summarizing as a comprehension check and evaluating strategies such as assessing the success of the task.

Overall this taxonomy draws parallels between reading and writing cognitive strategies. When reviewing empirical research of learner development studies and instructional studies in both reading and writing in Chapter 2, it was found that strategies were generally taught in combination rather than in isolation. Furthermore, experts use a number of strategies simultaneously while engaged in a task. As Grabe (2009) pointed out fluent readers will analyse words, look at transition words, mentally summarize and predict as they read a section of text. Hayes (2012) described the writing process as recursive and that any strategy can be employed at
any time and in combination. Therefore, the taxonomy encompasses much of what expert readers and writers do.

**The Construct for Cognitive Episodes**

Once the taxonomy was developed, I needed to establish a method of coding the teaching and learning activities. Data for this study are based on teacher verbalization and modelling during instruction, and on students’ think-alouds about their learning; accordingly, two coding systems were needed. The first was a system for the teacher’s verbalization. As Pressley et al. (2001) determined in their study of ordinary and exemplary teachers, the implementation of teaching strategies varied, as expert teachers had greater awareness of students’ needs and their meta-talk and demonstration were more explicit than those of the less expert teacher. Based on the research by Pressley et al (2001), Cumming (1995) and Zhang (2008), teachers may not model explicitly or model like an expert consistently, so the frequency and the intensity of the cognitive strategy training could vary. Accordingly a method of coding that delineated these variations was needed and three types of episodes for teaching were developed.

**Episodes of Raising Awareness (ERA)**

When teaching, an instructor may raise awareness by telling learners of strategic processes but not directly explain the process or how to use the process. There is little or no demonstration or practice of how to implement the strategy. Essentially, the teacher talk is a very teacher-centred lecture style, has little student engagement, and essentially tells the students what to do. An example of such an episode is the instructor telling the students they need to create an essay outline as a pre-writing strategy. The teacher might point out some benefits of the strategy, telling the students that it will help with organizing the writing, but actually does not demonstrate or expand upon how, why, where, or when the strategy is important. Such teaching episodes are named Episodes of Raising Awareness (ERA).
Episodes of Strategy Explanation (ESE)

In this study, strategies suggest a teacher intentionally teaches and practices a process through specific awareness raising activities that highlight the importance of the strategic behavior (Zhang, 2008). Episodes of Strategy Explanation (ESE) are when the teacher deliberately explains and models a strategy according to Zhang’s strategy instruction procedures of what the strategy is, why it is important, when to do it, where to use, how to use it and how to evaluate it. For example, the teacher could explain certain aspects of sentence structure. Throughout the strategy instruction, the teacher explains the strategy while writing on the board or reading a text or even using student work; however, the demonstration may not be extremely explicit. Students are told of the importance of the strategy and why to use it. The teacher employs a method of think-aloud or questioning to engage students, but the level of demonstration and the intensity of the meta-language are not carried out in a manner demonstrative of an expert an expert modelling the task. As another example, the instructor describes the benefits of writing an outline and explains or shows the main elements such as planning the introduction, the thesis, the body paragraphs and the conclusion. This might include showing an example such as in a textbook but not actually showing ‘how’ it was created or the writer’s thought processes behind it.

Episodes of Cognitive Modelling (ECM)

The third type categorization is Episodes of Cognitive Modelling (ECMs) based on Cumming’s (1995) study of where “instructional approaches to cognitive modelling usually involve displaying, then enhancing, the mental strategies that people use when they write” (p.383). ECMs occur when a teacher engages in more explicit modelling than in ESEs. The teacher intentionally teaches and practices a process through explicit awareness raising activities that expertly validate the importance of the strategic behaviour (Zhang, 2008, Pressley et al., 2002).
In these ECMs, the teacher demonstrates the “how” of the strategy by deliberately explaining and modelling strategy procedures in the manner of an expert. Unlike the example of modelling sentence structure as an ESE, in an ECM, the teacher engages in a form of teacher talk where she thinks out loud to bring the process of ‘how’ and ‘why’ to life. Students have the opportunity to share in the cognitive processing of the teacher by being ‘inside the expert’s head’ while she is writing on the board or overhead or using student work in order to show revising strategies. This can involve a series of questions that either engage the learners or the teacher asks questions and immediately provides answers as if thinking aloud to the self (Roehler & Cantlon, 1997). This question and response is a form of social modelling (Cumming, 1995) that engages students as part of the process. Learners then hear as well as see how the expert does the task. There is a difference between ‘telling students what’ (ERA), ‘explaining and showing students how’ (ESE), and ‘modelling extensively and thinking aloud about how to do the task in the manner of an expert’ (ECM)

**Episodes of Cognitive Learning (ECL)**

Likewise, in learning, it is important to gauge if a student is using strategies by analysing and coding their activities. Episodes of Cognitive Learning (ECL) entail a student demonstrating an awareness or use of a cognitive strategy while thinking-aloud in a stimulated recall whereby a student reads aloud a sentence or more from a piece of writing and describes the thinking during the composing process of that specific chunk. This suggests that a student has made a decision to use a specific or multiple strategies. For example, students may deliberately choose re-read a thesis statement and analyse it for parallel structure in word forms, consider word choices and think back to readings to be sure that the thesis has captured the main ideas. ECLs were not subdivided into different levels of episodes as were the teaching episodes as this would have made the data analysis unnecessarily complicated.


**Coding the teaching episodes**

Examples of the three types of cognitive teaching episodes are given below as well as how they would be coded according to the *A Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning* (see Table 3). An episode is an utterance that is a complete thought. It could be one sentence or a number of sentences that join to form one coherent idea. The episode ends when there is a pause or a completely new thought begins.

The first example is an Episode of Raising Awareness (ERA) as Sophia only mentions the need for a checklist, and this would be coded on the taxonomy as *Regulation of Reading and Writing Task Processing*: (5.4 - gives check lists to help assess structure.) The end of each episode has a notation that references it by the type of episode, the week, the day in which it took place. Furthermore each episode is numbered in the sequence it occurred and the coding from the taxonomy completes the notation. The following ERA shows this notation. Sophia said: “You have a checklist. Use it or not. It depends on your style” (ERA Week 3, Day 3, E7, 5.4).The notation reads Episode of Raising Awareness, Week 3, Day 3, Episode 7 (from the field notes) and is coded under *Regulation of Reading and Writing Task Processing* as (5.4 - gives check lists to help assess structure).

In the next episode, the utterance is longer, and Sophia describes two strategies: 1) thinking about previous knowledge and 2) the need to read for content. More than one aspect of the taxonomy has been applied. This episode is an Episode of Strategy Explanation (ESE) and would be coded both as *Ideas and Information* (1.1 - schema activation of ideas) and (1.2 -raising awareness of reading or listening for topic information). Sophia said:

Time gives us separation from the reading. We start with what we know about the topic. We need to apply it to our reading and take that into our writing. Write in an
original way and make it your own. Your ideas will come from elsewhere. You need to be informed, so you need to read. We need to have content, so we can write. This is how we get started as we write. (ESE, Week 1, Day 1, E5, 1.1, 1.2)

This ESE differs from the previous ERA in that Sophia is explicit about the rationale for gathering ideas and how they will inform writing. In this episode, her use of ‘we’ and ‘need’ is engaging, and she included the students in her rationale.

In the last example, an Episode of Cognitive Modelling (ECM), Sophia writes on the board as she speaks about building collocational vocabulary for an upcoming essay on branding. Different to the previous episodes, Sophia models and thinks out loud as she writes. This episode from Sophia is coded as an ECM, Language below Sentence Level: Vocabulary (2.2 building use through collocations or synonyms).

The collocations would be ‘brand’ as an adjective + noun. I also know I can have phrases that use adjective plus brand. Let me write this down on the board. OK Let’s brainstorm for some of the first kind. When I do this, I have to put the word ‘brand’ first. I can’t say loyalty of brand. Why? Well… It sounds like the brand is loyal. But what is loyal? Yeah. The consumer is loyal to the brand. That is why I have to say ‘Brand loyalty.’ What others are there? Let me think. Brand awareness! Brand identity! Brand reputation! I can say ‘reputable brand too! Look how I am building vocabulary! I need to remember these words when writing (ECM, Week 1, Day 1, E8, 2.2).

In this ECM, Sophia is explicit in her modelling. She explains what collocations are, why they are important, when they are used, she shows how to use them, and where and evaluates them as being correct or not. As the expert, she explains that ‘brand loyalty’ is the correct choice over ‘loyalty of brand.’ Specifically, she engages in a rhetorical questioning as she thinks through other collocations with the word ‘brand’. Students are involved in the process through her questioning and her writing the words on the board. Her meta-language has words such as “I know…” “Let’s.” “Let me think.” “Look…”, and “I need,” all of which give learners the opportunity to share in her thought processes.
Analysis of Teacher Data

In this section, I describe converting the data to text, coding procedures, reliability and the procedures for data analysis of the teacher observations.

Coding and analysis of observational data

I transcribed all classroom interactions from the field notes with a focus on teacher talk and board work. These notes were organized into ten files corresponding to each day and week of class. I integrated my own reflections into these files. As I was transcribing my field notes, I colour coded the data (See Appendix F) for teacher talk that was an episode of teaching strategies.

Although this colour-coding process helped to delineate teacher talk, and that an episode was an utterance which was a complete thought, I found determining the length of an episode challenging, as some episodes seemed long even though they contained one main idea, while some were very short, and others included interactions with students. Sinclair and Coulthard (1975) in their categorization of the types of spoken discourse in a classroom found that discourse could not be easily categorized into utterances (one speaker) and exchanges. Rather classroom discourse involves five ranks: lesson (being the highest), transaction, exchanges, move, and act (the lowest). Sinclair and Coulthard describe three acts as “elicitation, directive and informative - and they appear in classroom discourse as the heads of Initiating moves (p.28). These moves often framed by markers such as ‘now’ or ‘well’. The researchers also found a consistent pattern of exchanges whereby questions are asked and answered, and feedback given on answers. Although Sinclair and Coulthard’s model is helpful in understanding classroom discourse, it was not helpful in deciding the length of units of analysis. Tesche (1990) described a unit of analysis as “a segment of text that is comprehensible by itself and contains one idea, episode or piece of information (p.116).” This seemed a useful way to analyse the teacher talk.
Accordingly, as I was analysing data for cognitive teaching episodes, the length of an episode varied depending on the information being given. In some cases the episodes were short as in this example:


Other episodes were longer and sometimes consisted of a sequence of turns between Sophia and one or more students. The following dialogue is an example of an interaction in the first week where Sophia is brainstorming with the class. Note: T refers to Sophia. S1 refers to Student 1 and S2 refers to Student 2 in the interaction. This episode occurs as a pre-writing activity to a process essay.

(T): What would you rather do: read a book or write an essay?
(S1): What is the context of the book?
(S2): What is the topic of the essay?
(S1): Writing takes less time.
(T): (Holding up a blank page of paper). What is your feeling?
(S2): So empty. No ideas.
(T): What is a brand? What is brand loyalty?”
(S): Different categories of products that we like to buy. Buy the same one over and over.
(T): Give me a brand name! Nike? Yup. Why are you loyal to it?
(Week 1, Day 2)

Accordingly, a table was created for each week of teaching and was divided into the three teaching days. Once the tables had the field notes transcribed into them, I could begin coding.

**Coding reliability**

To check the reliability of the coding, I invited a colleague who is an expert in L2 writing and has her doctorate in second language acquisition. She is familiar with coding systems as she had used them in her own dissertation. I first explained the general ideas underlying the study, the three types of cognitive episodes and explained the *Taxonomy of Reading-to-write Teaching and Learning Strategies* coding system. We discussed the operational definitions to be sure we
had the same understanding. There were 40 episodes in total (approximately 20% of the data) to be coded, which were taken randomly from Weeks 2, 6 and 7. The colleague and I coded the first three episodes together to be sure she understood the process. She then coded the remaining 37 episodes. She had to make multiple coding decisions (ERA, ESE or ECM) and had to decide where the episode fit the taxonomy of behaviours. The percentage of agreement with my coding was 95%.

Once the coding was complete, I created an Excel spreadsheet that tabulated the 199 episodes into the three types (ERA, ESE and ECM). The spreadsheet also included the five categories of teaching strategies according to the taxonomy and frequency counts were tabulated of the number of activities per type. These data were also represented by percentages in order to compare total types of behaviours. For example, the Ideas and Information section was broken down into the three teaching activities (1.1, 1.2, and 1.3) and frequency counts were tabulated for over the 10 weeks of the course. Then, the data could be further analysed by comparing the percentages of ERAs, ESEs, and ECMs. This system proved effective for coding. See Appendix N for an example of a table of one day of coded teaching episodes. Colours are still used to delineate the types of episodes and any board work.

**Teacher interview data**

To prepare the interview data for analysis, all teacher interviews were fully transcribed into text files. Where there were inaudible words or laughter that caused difficulty in understanding, I wrote ‘inaudible.’ The subsequent data analysis followed various stages. First, I read the interview scripts for general content; then, I divided the transcripts into units for analysis. The first such unit was informational data from the first interview regarding background and the course. I then reread the first interview for the teacher’s philosophy of
teaching and her beliefs about writing development. Relevant data were colour-coded by highlighting the transcript to facilitate the later discussion of the results.

The second and third interviews required a more detailed analysis. Since many of the questions were related to classroom observations, I was seeking a relationship between what I had observed and Sophia’s perceptions of teaching and learning. Any interview data that related to teaching episodes were colour coded depending on the theme being taught. Through this process, I was able to cross reference interview data to the same theme in the classroom observation data.

**Analysis of Student Data**

The following sections describe the data analysis strategies for both class and focal student data.

**Class questionnaires**

Data from the initial questionnaire were transferred to an Excel spreadsheet and analysed to create a class profile and individual profiles of the focal students. Answers to the open-ended questions were also recorded in the Excel program. The final questionnaire comprised of the chart of teaching activities and was analysed using a Likert scale with 4 being “Really helped me a lot” and 1 being “Didn’t help me at all.” These data were then analysed using descriptive statistics of frequency counts. Comments from the open-ended questions were transferred verbatim including student errors to an Excel spreadsheet so that answers to each question were easy to analyse. I then categorized the comments by colour-coding to match the emergent themes from the observation data. By doing this, I was able to triangulate data from the observations, the instructor and the students.
Analysing focal student stimulated recall protocol data

Given the number of retrospective stimulated recall protocol data (30 sessions), I did not transcribe each session verbatim but listened to each, and transcribed relevant moments in the think-aloud that provided evidence of a reference to a teaching episode, and verbal student errors were included in the transcription. I had copies of the student essays that I could refer to while listening to the recalls. Any student essay data used to support a stimulated recall included student written errors.

After transcribing the relevant elements of the data, I categorized the ECLs in table form according to the Taxonomy of Reading-to-write Teaching and Learning Strategies and the corresponding operational definitions of learning (see Table 4). A single ECL was determined by the amount the student read and reflected on. Once the data were coded, a descriptive statistics strategy was used to tabulate frequency counts and percentages of behaviours. Results were further cross-analysed with teacher data to look for comparative behaviours and themes between the two data sets.

Analysing focal student final interviews

The final interviews were transcribed and analysed for further evidence of cognitive learning and perceptions of strategy use. These data were carefully analysed for themes that related to the teaching and analysed for student perceptions of learning. Data were colour-coded thematically in order to facilitate the ease of implementing into the discussion of the findings.

Reliability and Validity

Case studies can be evaluated for their reliability and validity if there is a clear description of study design, data collection and analysis procedures (Merriam, 1998). Most of the data in this research were analysed through qualitative strategies in order to provide rich descriptions of the case study. Merriam (1998) noted that qualitative research could be difficult
to assess; however, the descriptive statistics add a layer of reliability (Duff, 2008). Given that
the classes observed were not audio-recorded, and teacher talk was recorded in my field notes
only, the reliability and validity of this study could be questioned. However, the addition of
student questionnaires, focal student stimulated think-aloud protocols, teacher and focal student
interviews add multiple perspectives to the observational data.

In field of second language education observation research, Larsen-Freeman and Long
(1991) described the researcher as being either a participant or non-participant. A participant
observer takes part in the activities in the classroom and takes field notes once the activities are
completed. In contrast, a non-participant observer does not participate in classroom activities but
tries to reconstruct what the “subjects are experiencing as accurately as possible” (Seliger &
Shohamy, 1989, p.120) from the perspective of those being observed and not from the view of
the researcher. In this study, I assumed the role of non-participant observer, where, in the
classroom, the main goal was to gather teaching data. I attended all classes other than classes
with midterms or tests; therefore, the 45 hours of observations contribute significantly to the
validity of the research. However, I was the only observer in the classroom, and the data
analysis was based only on my perceptions. I brought my expertise as a writing instructor to the
study; however, had there been other observers they might have taken notes of different aspects
of the classes observed.

As much as possible, I standardized the procedures during the research by using the same
protocol and prompts when collecting the think-aloud data so that no one participant was
advantaged. When interviewing students, I followed the same set of guiding questions in each
interview. I believe the classroom offers a rich opportunity for observing second language
learning in a natural learning context. Well-conducted studies can enhance “our insights into how
languages are learned and should be taught” (Mackey and Gass, 2005, p. 219). Similarly, Nunan
(1992) stated “As language classrooms are specifically constituted to bring about learning, it is not unreasonable to collect data about what goes on there as a means of adding to our knowledge of language learning and use” (p. 91).

However, Merriam (1998) pointed out that in a case study the varied methods of data collection usually have no control as they are dependent on the researcher and may be, unreliable. Therefore, in this study, once the observational data and student data were coded, they were also analysed using descriptive statistics of frequency counts and percentages in order to provide validity to the study and to further triangulate data. The inter-rater reliability as described earlier adds validity to the coding for data analysis.

**Limitations**

I acknowledge that aspects of this approach have limitations due to the potentially unreliable self-reported data from the focal student think-aloud processes. Also, I needed to be careful of researcher assumptions that bias the nature of questionnaire statements or interview questions by leading the both the teacher and student participants to a response. In addition, participants may have had difficulty determining their own behaviour, and responses may have been biased towards what the participants believed the researcher expected to hear; this is known as the halo effect (Mackey and Gass, 2005).

Furthermore, Mackey and Gass cautioned researchers that case studies are often not generalisable often due to the small number of non-randomly chosen participants. Duff (2008) warned that case studies are not generalisable as the descriptions are valid only for the one participant, in this case, the teacher. However, for this thesis, a case study of the classroom with the teacher and students as subcases is the appropriate research design model to meet the goal of investigating how instruction of cognition in reading-to-write is taught and relates to writing performance. Merriam (1998) posited that the extensive descriptions in case studies allow
readers to think beyond the case study and apply the findings to other contexts. My goal is to present data in such a way that other teachers can relate to the findings and extend the ideas to their own practices.
CHAPTER 4

A VIEW OF THE COURSE, THE INSTRUCTOR AND THE STUDENTS

This chapter provides an overview of the course and gives background on the instructor, Sophia, drawn from her initial interview. Then I introduce the class, the focal student participants and the course activities.

The Course: ENGLISH 9001

ENGLISH 9001 (ENGL 9001) is an academic reading-to-write course that is in high demand from students at SWU. The one-semester course is open to undergraduates, who receive academic credit for the course. All registrants must be non-native speakers of English. If the English proficiency of a student is near native, that student has an interview with the Academic Dean and may be asked to move to a mainstream English class. Students registered in ENGL 9001 are either international students or students who immigrated within 5 to 10 years of attending university.

ENGL 9001 also gives credit instead of writing the university wide English proficiency exam. At SWU, all students have to pass an English proficiency essay exam based on a prompt (similar to a TOEFL or IELTS essay) before the end of their second academic year. Students receive the English Proficiency Credit, which is required in order to graduate from any program. The 50-minute exam takes place three times a year at the beginning of the fall, winter and spring terms. Many faculties require that students write the exam in their university first term. The passing grade is 60% for the maths and sciences and 65% for arts and economics. The test has a high failure rate especially amongst non-native speakers of English. Faculties allow failing students until the end of their second academic year to gain the credit. Depending on the faculty,
failing students’ registration is cancelled and they have to take a term off, or students are put on academic probation and are limited to registering in just one course in their major.

As a result, the university has options for students who have failed. These include attending a writing centre for help or taking one of a number of courses that have been designated a replacement for the exam. Two ESL courses are offered for non-native speakers, ENGL 9001 and a more general grammar-based course. The university also offers four other English writing courses in which native speakers generally register. The required passing grades for these courses are the same as the ones set by the different faculties for the English proficiency exam. Accordingly, registration for ENGL 9001 is always full with a waiting list.

Overall, the ENGL 9001 curriculum is designed to help students write effectively in the academic environment at SWU. The classes provide advice and instruction on how to develop and support ideas in writing that are grammatically and stylistically appropriate. Students practice preparing written assignments such as essays and summaries that follow specific genres: descriptive, compare/contrast and argument based on specific course readings.

This 55-hour course was held three times a week totalling 5 and a half hours and ran for 10 weeks. Even though the semesters at SWU run for 12 weeks, ENGL 9001 started in the third week of the term. Results of the English Proficiency Exam were not released until the term began, so this late start of the course allowed students who had failed the university exam to register and to gain the benefit on an entire course rather than enter a course in progress in the third week of term. Each week, the first two classes of one and a half hours each were the main teaching sessions, and in the final two and half hour Friday session, students wrote an assignment in what the instructor called ‘a workshop.’ This class began with some teaching, and then students usually had approximately an hour and half to plan and write a four to five paragraph essay.
Table 5 outlines the weekly themes, grammar, and reading skills taught and the type of writing tasks completed during the semester. The course was divided thematically according to readings in a text and to additional online readings. In ENGL 9001, the four themes outlined in the table (personal branding, alternative and complementary medicine, vaccine safety and genetically modified foods) became the basis of content for the writing assignments. Furthermore, all grammar taught was contextualised with vocabulary and content from the readings so that language was continually scaffolded and practiced.

Table 5
*Overview of Themes, Instruction and Assignments in ENGL 9001*

<table>
<thead>
<tr>
<th>Week</th>
<th>Theme</th>
<th>Writing/ Grammar</th>
<th>Reading Skills</th>
<th>Type of Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Personal Branding (Sociology and Business)</td>
<td>SEES Paragraph structure; essay structure</td>
<td>Scanning/ margin notes</td>
<td>Process writing Draft 1</td>
</tr>
<tr>
<td>2</td>
<td>Personal Branding (Sociology and Business)</td>
<td>Thesis statements. parallel structure, objective writing</td>
<td>Synthesising readings</td>
<td>Process writing Draft 2</td>
</tr>
<tr>
<td>3</td>
<td>Alternative and complementary medicine (Health)</td>
<td>Coordination Sentence structure</td>
<td>Contrast vocabulary/margin notes</td>
<td>Compare/Contrast writing Draft 1</td>
</tr>
<tr>
<td>4</td>
<td>Alternative and complementary medicine (Health)</td>
<td>Article use Sentence variety</td>
<td>Avoiding plagiarism and referencing</td>
<td>Compare/Contrast writing Draft 2</td>
</tr>
<tr>
<td>5</td>
<td>Review for grammar test</td>
<td></td>
<td></td>
<td>Grammar test and Midterm writing exam</td>
</tr>
<tr>
<td>6</td>
<td>Vaccine Safety (Health)</td>
<td>Active to passive</td>
<td>Paraphrasing</td>
<td>Paraphrasing assignment</td>
</tr>
<tr>
<td>7</td>
<td>Vaccine Safety (Health)</td>
<td>Comma splices and run on sentences, problematic words</td>
<td>Summarizing</td>
<td>Summary Assignment</td>
</tr>
<tr>
<td>8</td>
<td>Genetically Modified Foods (Science)</td>
<td>Modals of recommendation</td>
<td>In-text citations</td>
<td>Argument Essay Draft one</td>
</tr>
<tr>
<td>9</td>
<td>Genetically Modified Foods (Science)</td>
<td>Conditionals</td>
<td>Synthesising readings</td>
<td>Argument Essay Draft 2</td>
</tr>
<tr>
<td>10</td>
<td>Review for final test</td>
<td></td>
<td></td>
<td>Final grammar test</td>
</tr>
</tbody>
</table>

The text used was *Learning English for academic purposes* (Williams, 2005), which focuses on strategic reading and writing. The text is divided thematically into content areas such as
The course writing tasks were generated from the readings, and classroom instruction focused on the genres of the writing assignments. For example, instruction focused on process writing and contrasting. Furthermore, paraphrasing and summary writing tasks were a practice for an argument essay involving research. The course used a two-draft system for the assignments, which were hand-written in class. Students were allowed to use the course text, course notes, grammar notes and English dictionaries for the writing assignments. Besides editing, the requirement for the second draft usually required the addition of content. This could mean adding a quotation or adding more details in an additional paragraph.

Each draft was worth 10% in total of the final grade, with the first being weighted at 60% and the second weighted at 40%. In addition to the writing assignments, the instructor gave some sentence exercise assignments that incorporated the grammatical structures into the vocabulary learned. These small assignments (a total of five throughout the semester) took 15 minutes at the beginning of the class and counted for 5% of the total marks. The course had a midterm exam which was worth 10%, two grammar tests at 10% each and a final exam worth 25% of the final grade. Both the midterm and final exams focused on essay writing.

A typical teaching session in ENGL 9001 involved introducing grammar points, the writing process, reading strategies or the content of the readings through instructor led discussions followed by pair or group work. Many of the interactive activities included student-generated work such as sentences from their essays or generated during group work. These
student examples became the material the instructor used for teaching grammar points, improving vocabulary acquisition or discussing writing strategies.

The instructor, Sophia, called the teaching materials ‘course maps’ (See Figure 1) and these were usually distributed to students in the first class of the week. After the class, the materials were uploaded to SWU’s learning forum. Students who did not attend class were expected to access these materials and be prepared for the following class. Figure 1 is an example of a course map that Sophie used in Week 6 of the course. The theme was Vaccine Safety and the grammar was turning active verbs to the passive voice as a paraphrasing technique. Sophia effectively incorporated the theme and the vocabulary from the text into her own course map for the teaching and practice of the grammar. Every week the teaching materials that she used for grammar or sentence structure reflected the vocabulary from the textbook’s readings. It was presented in such a way that students had practice with the vocabulary before doing the writing assignment.

*Figure 1. Example course map for Week 6*

<table>
<thead>
<tr>
<th>Week 6</th>
<th>Preparing to Use the Passive Voice in Paraphrasing</th>
</tr>
</thead>
</table>
| **The active voice is preferred** over the passive voice in academic writing forms such as argumentation or persuasion. However, the passive voice is useful in paraphrasing statements found in research material. The passive voice emphasizes the recipient of the action (the patient/virus) and not the actor or “doer” of the action (the doctor/virologist). Thus, it is important to know the difference between the active and the passive voice.

**Forming the Passive** = be + past participle

<table>
<thead>
<tr>
<th>Verb Tense</th>
<th>Active</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple present</td>
<td>The doctor <em>diagnoses</em> John.</td>
<td><em>John is diagnosed</em> by the doctor.</td>
</tr>
<tr>
<td>Present continuous</td>
<td>The specialist <em>is diagnosing</em> John.</td>
<td><em>John is being diagnosed</em> by the specialist.</td>
</tr>
<tr>
<td>Present perfect</td>
<td>The practitioner <em>has diagnosed</em> John.</td>
<td><em>John has been diagnosed</em> by the practitioner.</td>
</tr>
<tr>
<td>Simple past</td>
<td>The naturopath <em>diagnosed</em> John.</td>
<td><em>John was diagnosed</em> by the naturopath.</td>
</tr>
<tr>
<td>Past continuous</td>
<td>The kinesiologist <em>was diagnosing</em> John.</td>
<td><em>John was being diagnosed</em> by the kinesiologist.</td>
</tr>
<tr>
<td>Past perfect</td>
<td>The homeopath <em>had diagnosed</em> John.</td>
<td><em>John had been diagnosed</em> by the homeopath.</td>
</tr>
<tr>
<td>Simple future</td>
<td>The environmental doctor <em>will diagnose</em> John.</td>
<td><em>John will be diagnosed</em> by the environmental doctor.</td>
</tr>
<tr>
<td>Be going to</td>
<td>The chiropractor <em>is going to diagnose</em> John.</td>
<td><em>John is going to be diagnosed</em> by the chiropractor.</td>
</tr>
<tr>
<td>Future perfect</td>
<td><em>The acupuncturist will have diagnosed</em> John.</td>
<td><em>John will have been diagnosed</em> by the acupuncturist.</td>
</tr>
</tbody>
</table>
Passive and Active Verbs Activity Sheet
Complete the following phrases to demonstrate the passive voice and the active voice using vocabulary from the course readings.

Examples:
Adverse effects were… Adverse effects were experienced by the child. (passive)
The child experienced adverse effects. (active)
The immunization appointment was…
The immunization appointment was cancelled by the patient. (passive)
The patient cancelled the immunization appointment. (active)

1. Most of the needles had
2. The vaccination has
3. The inoculation is
4. It was believed by the

The Instructor, Sophia

This section describes Sophia and her initial interview (See Appendix G). The interview’s purpose was to establish Sophia’s attitudes and beliefs about the relationship between reading and writing, her teaching philosophy and her thoughts on strategies. Sophia had five and one half years of experience teaching ESL. Upon completion of her Teaching English as a Second Language (TESL) certification, she began teaching at J. W. University College. She initially began in the non-credit program but moved to teaching credit ESL courses by the end of her second year. In order to teach credit programs at SWU, a graduate degree is required, and she had a Masters of Arts in literature. Her experience with the ENGL 9001 included two semesters of being a Teaching Assistant with other professors, and then teaching it herself for two semesters.

In the initial interview, Sophia was asked about the relationship between reading and writing and her immediate response was, “Symbiotic…. One feeds off the other. One can’t live without the other” and “to teach writing, reading is the thing that happens to help the writing occur.” This strong belief was reiterated throughout the course as she often told the students “Your reading informs your writing.”
Sophia believed that since many of the students were first year undergraduates, their lack of world experience and background knowledge could have an impact on their writing abilities and consequent lack of success in the university English exam:

If students have no content, how can they be expected to write about anything? I mean, they can have the form, they can have a reasonable sense of grammar, but the struggle is if there is no language specific to content. I think they end up against a wall, and it creates a lot of problems for them to be successful in their writing. I think the biggest thing that prevents students from passing the English Proficiency Exam is things like grammar issues and then content in that they have nothing to say because they are so young”

Many of the international students had experienced a different learning environment, and this too, Sophia believed created problems. She thought that in their cultures, there might be a different approach to teaching writing with little emphasis on synthesis and critical thinking. “In their countries, they are not expected to respond that way, where we, the western model expects a response with argument and support and a very strict form but with interesting language use because it is supposed to be academic university level writing”

Sophia also noted that students have problems completing multiple readings and being able to synthesise ideas may be in part due to their generation, “It’s culture too, and I don’t just mean home country culture. I mean youth culture doesn’t always take the time to synthesise and analyse, it just grabs the material and runs with it. I think that’s part of the plagiarism problem as well. Because of that grabbing, there’s no mulling over, there’s no time to consider.”

When asked about teaching reading strategies, Sophia commented that the focus was not to teach strategies such as scanning or skimming but rather that students “do the reading before they come to class and then we work out the tasks from there. Then we work out the collocations, the vocabulary issues. So it’s certainly not a reading class. It’s a writing class informed by reading...So it makes it a bit different in its focus.” Sophia also mentioned that the
specific reading strategies she focused on were paraphrasing and summarizing, as the writing assignments required these skills.

Sophia was asked about her philosophy of teaching, and her immediate response was that she approaches her teaching “with humour” Expanding this thought, she said:

Seriously! …I have to have something crazy happen in almost every class. It does not always work out. But even with the banter, it’s just something. Students have an issue of confidence and comfort in a class, and I think it is because so many resist writing because it is not an easy task. The blank page is so daunting even for anyone. I…I just think that if the room has some kind of funny or fun energy, it seems to calm people down. It helps. It really helps in terms of keeping people coming back to the class.

Sophia’s philosophy of teaching, besides using humour, was to build an environment where taking risks with language are “safe” and where the writing steps are broken down into “small parts” that are eventually brought together. Despite the course having little focus on reading strategies, Sophia believed that her extensive use of the content and vocabulary from the readings in all aspects of her teaching helped build student writing expertise. Furthermore, she believed that one-on-one interaction with students helped to build confidence in writing. She described how on assignment writing days, she becomes less of a teacher and more of a tutor or facilitator:

I think too there is this tutoring element to it as well on Fridays as well when they are writing their assignments. I am on my feet, and I am running to every student every time someone has a question or I try to get to everybody. I think a lot of that comes from trying to build a relationship with the students so that they don’t feel that I am the just one marking them all the time and that I am the one vested in them being successful too. It is so much more than beyond the point of writing. And I think that if you have a small class it is something that you can do for any subject area. It’s a confidence builder.

The above response from Sophia lead to the question of what the word “strategy” meant to her. She described teaching a strategy as being a ‘trick.” She began answering the question by
describing how students have many problems with the use of definite and indefinite articles, and
she would use this as an opportunity to teach strategies:

It’s something...its uh…it’s like a trick. It can be a trick because if you, if you,
understand that you have this problem with articles that there is the possibility of
going to third person or at least going to plural form. And then that you don’t have
to use the article at all. You’re kind of safe. Yeah. I consider that strategy a kind
of uh trick where you can avoid these problems. A strategy to...uh, not avoid the
language...but to actually do or actively help with something. It can be based on
anything. It can be based on collocations, points of vocabulary that will help make
your writing more interesting. So, strategies could be based in vocabulary
development and vocabulary focus as well.

When asked about how she actually teaches strategies, Sophia returned to the idea of
vocabulary being essential to how she teaches strategically. “The students need to have lots of
opportunity to work with collocations and see a pattern in language.” She pointed out that the
textbook is good for providing vocabulary for use in writing, but that she likes to exploit its use
and have students work with the language in class as much as possible.

Often we can pick up patterns that are based on metaphor and these metaphors are
predominant in various fields of study or certain areas. So, I think that by looking
at those metaphors, it gives them some more strategies to develop their skill set in
terms of writing ability. So where you have things like…

it’s really great when we get to vaccinations – the chapter on vaccines – because
a lot of language is military or language of war like you kill a lot of things, you
fight, you destroy, and so they start to see this pattern. What I really love is
metaphor coming through in verbs. So I like to say when you think about word
choice, the tendency is for us to focus on nouns and adjectives, those things that
we describe something with giving a lot of variety, when in fact, a really lovely
thing to do is to focus on your verb choice.

Even when asked about the particular writing strategies she taught, Sophia circled back to
the idea of vocabulary acquisition “Depending on the context, and I think again, that comes from
gambits and collocations and so that is more of a vocabulary focus in terms of reinforcing and
developing the pattern whatever is necessary.” She then described how language could vary
according to the genre, citing compare/contrast and argument as two examples of essay types
written in the class.
The final question for Sophia was regarding her perception of learner development and becoming a successful writer:

A lot of success depends on practice. For me the idea of drafting, review, is constant. Going back and forth and spiralling, reviewing - back and forward, I think is really important. It has to be a practiced activity. Students need to be able to hone a skill. It is so rudimentary. It is so Little House on the Prairie schoolhouse...the idea of practice, practice, practice. I really think that is what it is. It can’t be practice in isolation. It has to be the writer collecting thoughts, digesting thoughts and bringing the ideas to a classroom, working through the ideas with others, in a community rather than writing privately and then going to an editor or tutor.

The interview concluded with Sophia commenting about the relationship between reading and writing:

And reading...and in order to see how others write, you have to read what others write, to start to think about the patterns and the structure.

The Class Participants

The participants included 24 registered students and one auditing graduate student: 13 males and 12 females. Seventeen of the participants were Chinese, two were Korean, two were Indian and the others were Russian, Spanish, Japanese and Sri Lankan. Fifty-five percent of the participants were in first year while the others’ enrolment was evenly distributed from second to fourth year with the exception of the auditing graduate student. One third of the class (8) was registered in Arts and majoring in Economics, four students were in Biomedical Science, three were in Computer Science, three were in Math, and the others were in Engineering, Kinesiology, Arts (Classics), Sociology and General Science. The length of time that students had been in Canada ranged from 1 month to 27 years with most students having been in the country 3 to 5 years and having completed a couple of years in Canadian high schools before coming to SWU.

The student profile questionnaire

This questionnaire was administered on the second day of class. The questionnaire gathered information for the class profiles, while also asking participants to gauge their own
perceptions of their difficulties with reading and writing. Table 6 presents background information about the students.

Table 6
Profiles of Students in ENGL 9001 including Focal Students

<table>
<thead>
<tr>
<th>Year</th>
<th>Program of Study for each student</th>
<th>Nationality</th>
<th>L1</th>
<th>Other</th>
<th>Education outside Canada</th>
<th>Years in Canada</th>
<th>Pseudonym</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Arts</td>
<td>Chinese</td>
<td>Cantonese</td>
<td>Japanese</td>
<td>HS</td>
<td>1 month</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Arts</td>
<td>Chinese</td>
<td>Mandarin</td>
<td></td>
<td>HS</td>
<td>1/4</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Arts – Economics</td>
<td>Chinese</td>
<td>Mandarin</td>
<td></td>
<td>HS</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Arts – Economics</td>
<td>Chinese</td>
<td>Mandarin</td>
<td></td>
<td>HS</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Arts – Economics</td>
<td>Chinese</td>
<td>Mandarin</td>
<td>French</td>
<td>HS</td>
<td>16 months</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Arts – Economics</td>
<td>Chinese</td>
<td>Cantonese</td>
<td>French</td>
<td>HS</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Computer Science</td>
<td>Indian</td>
<td>English</td>
<td></td>
<td>HS</td>
<td>10 months</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Computer Science</td>
<td>Chinese</td>
<td>Mandarin</td>
<td></td>
<td>HS</td>
<td>3</td>
<td></td>
</tr>
<tr>
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<td>Mandarin</td>
<td></td>
<td>HS</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Biomedical Sciences</td>
<td>Korean</td>
<td>Korean</td>
<td>Japanese</td>
<td>UG</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Biomedical Sciences</td>
<td>Sri Lankan</td>
<td>Tamil</td>
<td></td>
<td>HS</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Bio-technology</td>
<td>Chinese</td>
<td>Mandarin</td>
<td></td>
<td>HS</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Engineering</td>
<td>Japanese</td>
<td>Japanese</td>
<td>German</td>
<td>UG</td>
<td>1/2</td>
<td></td>
</tr>
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<td>3</td>
<td>General Science</td>
<td>Chinese</td>
<td>Mandarin</td>
<td></td>
<td>HS</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Honours Science</td>
<td>Korean</td>
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<td></td>
<td>Elementary</td>
<td>11</td>
<td></td>
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<tr>
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<td>Kinesiology</td>
<td>Chinese</td>
<td>Cantonese</td>
<td>Mandarin</td>
<td>HS</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Math</td>
<td>Chinese</td>
<td>Cantonese</td>
<td></td>
<td>HS</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Math</td>
<td>Chinese</td>
<td>Mandarin</td>
<td></td>
<td>HS</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2 **</td>
<td>Sociology</td>
<td>Chinese</td>
<td>Cantonese</td>
<td>Mandarin</td>
<td>HS</td>
<td>3.5</td>
<td>Jessica</td>
</tr>
<tr>
<td>1 **</td>
<td>Masters/ financial math</td>
<td>Russian</td>
<td>Russian</td>
<td></td>
<td>BSc (Math)</td>
<td>6 months</td>
<td>Vladimir</td>
</tr>
<tr>
<td>1 **</td>
<td>Arts – Classics</td>
<td>Spanish</td>
<td>Spanish</td>
<td>French</td>
<td>HS</td>
<td>27</td>
<td>Armando</td>
</tr>
<tr>
<td>1 **</td>
<td>Arts – economics</td>
<td>Chinese</td>
<td>Mandarin</td>
<td></td>
<td>HS</td>
<td>6 months</td>
<td>Eva</td>
</tr>
<tr>
<td>3 **</td>
<td>Biomedical Sciences</td>
<td>Indian</td>
<td>Sindi</td>
<td>Urdu</td>
<td>HS</td>
<td>3.5</td>
<td>Rehan</td>
</tr>
<tr>
<td>1</td>
<td>Arts – Economics</td>
<td>Chinese</td>
<td>Cantonese</td>
<td></td>
<td>Elementary</td>
<td>11</td>
<td>Keith</td>
</tr>
</tbody>
</table>

HS = high school      UG = undergraduate experience    ** = focal students

Overview of the Focal Students

Six students volunteered to be focal participants. Four of the participants were male and 2 were female. As the Table 6 shows, the students were mostly in their first year of study, yet
were from a variety of disciplines and language backgrounds. This mixture of Asian, Middle-
Eastern and European participants gave this study richer and more varied student perspectives
than a sample of homogeneous participants would have allowed. The focal students had been in
Canada for a varying number of years and were at different levels of English proficiency in both
vocabulary development and writing ability.

All 6 focal students were enrolled in programs where academic essays or reports were
required course assignments, as compared to many other students in the class who were in the
Faculty of Math or the sciences, where written assignments are infrequently required. This need
to write academically could well have been an impetus for the focal students to volunteer to
participate in this study. Accordingly, even though these 6 students had the same goal of
improving writing, they brought different experiences to the course. Their different levels of
English and previous experiences may have influenced the outcomes of their learning as they
applied and mentally processed Sophia’s teaching.

The focal students and their writing journeys

In order to provide background for the data analysis in Chapter 6, a brief description of
the students’ backgrounds and their writing journeys in the course follows. Accordingly, this
information may allow for interpretation and understanding of the student stimulated recall data.

The six students had different educational experiences, levels of English and reasons for
taking course. It is these reasons and their journeys that gave rise to how they are described
below. Rehan and Vladimir can be described as the “experienced,” Keith and Armando
described as the “struggling” and Jessica and Eva as the “determined.”

Rehan – the experienced

Coming from India, Rehan was very fluent in spoken English, and had experience with
the Canadian university system as he was in third year Bio-Medical Science. He was enrolled in
the course in order to gain his English Proficiency Credit. In the initial questionnaire, he described having problems with “Organizing my thought process into a coherent paragraph.” When describing reading, he commented, “Not many problems. Only when I read a difficult to comprehend a piece of vocabulary, I read it again and open a dictionary.”

He was a very gregarious young man who frequently liked to be the first to answer questions in class. He had a good sense of humour and would frequently joke with Sophia by interjecting and adding his opinion to what she said. His fluency and his high level vocabulary set him apart from the other students, and he was not always welcomed into group work because he was viewed as a ‘know-it-all’ by others. He often vocalized that he knew grammar and how to summarize and paraphrase because he was in third year Bio-Med and had essay writing experience. However, his attendance was problematic as he missed eight of the 24 classes, thereby missing some assignment preparation sessions. This impacted his writing as he was not always on task; for example, rather than writing a paraphrase, he wrote a summary. He had the potential to be a very good writer, and Sophia recognised this talent, but Rehan seemed unwilling to extend himself to improve. He was successful in the course and received a passing grade high enough to award him the necessary credit.

**Vladimir – the experienced**

Having arrived from Russia 6 months previously, Vladimir was a Master’s student in Finance and had obtained special permission to register, as ENGL 9001 is not generally open to graduate students. Even though he had the experience of four years of university and writing extensive papers, he was highly motivated after enrolling in the course as his goal was to improve his writing skills in preparation for his thesis. Of writing, he said,

> My vocabulary is poor. Hence I have no words to express my thoughts. Even if I know the word or I’ve seen it before, it is hard to remember/recall it immediately. I often stuck with looking for synonyms. Problems with grammar structure. I
think and express my thoughts in my own language whereas no rules like word order.

When commenting on reading, Vladimir said, “Understanding the word from the content. This leads to misunderstanding of the whole idea. It is hard to create the complete picture of the text. To understand, I have to read several times.” Despite his motivation to improve his writing, he missed a number of classes because he had responsibilities as a TA. Sometimes, his absences caused him to miss important instruction, and this impacted his success in the writing tasks. Nevertheless, Vladimir was very serious about his learning and was successful in the course.

**Keith – the struggling**

Keith had emigrated from Hong Kong 11 years previously and had attended elementary school for a few years as well as high school in Ontario. Nonetheless, Keith still had many errors in his written English. He was typical of a Generation 1.5 learner in that his oral skills were quite strong. He was a confident young man and frequently volunteered answers to grammar questions, as he was keen to improve. Keith sat in the centre of the class and was very affable with the students around him. He had difficulty sitting still and was constantly twirling a pen or doodling. This restlessness sometimes affected his writing time in assignments as he sometimes had difficulty focusing and would sometimes leave the class for a few minutes. He sometimes claimed that he had writers’ block. On the initial questionnaire, he identified grammar as one of the problems for him, “The problems that occur are grammar problems. Structure and the use of vocabulary are the problem.” Of reading, he commented, “It is mostly okay.” Accordingly, he was motivated to improve his writing and paid attention when necessary. As a result, he was successful in his writing and passing the course.
**Armando - the struggling**

Of the 6 students, interestingly, Armando was the only student not in the 19 to 24 age bracket. He had no experience of learning in the Canadian education system, but he had taken advantage of being able to register in university as a senior citizen and he choose to pursue a degree in a subject he loved, the classics, after being in Canada for 27 years. It was many years since his high school experiences, and he was adjusting to learning again in the classroom setting. Armando was charming and full of world knowledge, which he brought into the classroom with his discussions. Despite his time in Canada, he still struggled with English. On the initial questionnaire, he commented on his perceived writing difficulties, “It is difficult to organize my writing. Very hard to start. The introduction is very hard. I would like write with a clear way to express myself.” Of reading, he comments, “Idioms sometimes is very difficult. Every time I read a book, I find new words hard to learn. It doesn't get better to use to look at the dictionary.”

During the course, Armando often articulated that he found the entire learning process very frustrating as he was older. He often found timed assignments difficult to do because he needed more thinking and planning time and frequently was unable to finish the task. He often commented that if he had to orally present ideas, he would be better than he was as a writer. His strength was that he possessed a good range of vocabulary; however, he had had no previous formal training in writing. Consequently, the organizational structures of writing baffled him as he seemed unable to comprehend the formatting of an essay, forming a thesis statement and adding support. His organization sometimes seemed to be a series of disjointed sentences, and he rarely met the word limits for assignments, which ranged from 250 words for the first assignment to over 500 words for the last. He spent most writing sessions feeling discouraged and being vocal about his frustrations with himself. Sophia spent extra time with him and tried
to encourage him. He was successful in just passing the course despite having missed four classes and struggling with assignments.

**Jessica – the determined**

Jessica came from Hong Kong, and had completed two years of high school in Canada. She was in Sociology and writing was a requirement for her as well as paraphrasing and summarizing skills that she would use in research papers. Since she was in the Arts Faculty, she needed 65% in order to receive the English Proficiency Credit and she was very determined to surpass this grade. She strove for perfection. On the initial questionnaire, she wrote, “I think I spend so much time on perfecting a sentence, so it takes relatively long for me to write an essay in a short time frame. It is difficult like when I did the English language exam.” However, she did not identify reading as being a problem, “I think I am okay with reading.” Jessica was very quiet and often reticent to answer questions in class. She tended to sit alone at the side of the classroom and was quiet during group work. However, when she did offer opinions in the classroom, they were well thought out. When she wrote practice sentences on the board, it was often clear that she was motivated to improve her range of vocabulary and reduce her errors. Jessica was very successful in the course,

**Eva - the determined**

Eva was Chinese, in her first year and had only six months experience with the Canadian education system yet was determined to become part of the academic culture. Enrolled in the Faculty of Arts, Eva needed 65% in order to gain her English Proficiency Credit. Her perception of her writing was that “Word choice is one of my difficulties in English writing. It is frustrate to choose suitable word to express. Grammar mistakes are often made in essays.” Her perception of reading was that it too is difficult: “It is hard to catch the main ideas. Lack
vocabulary. Read the articles slowly. Sometimes not familiar with enough with the structure of
the sentence.”

In the class, Eva sat with three other first year students including Armando, and there was
often a lot of chatter from their corner of the classroom. Eva enjoyed the group work and was
not afraid to add to class discussions. The foursome collaborated well in group work and often
talked with each other when writing assignments. Eva was serious about her writing and
genuinely wanted to improve as she was in economics, in the Faculty of Arts, and was also
taking courses in anthropology and religion. Consequently, she thought anything she learned in
the writing class would be helpful in her other courses. Eva always completed required
homework and came to writing days fully prepared. She was very methodical in approaching her
writing. She used outlines when writing, consulted dictionaries and her textbook. She was
frequently concerned that her writing would be confusing to the reader as a result of her lack of
vocabulary. Overall, she was very diligent and did well in the course.

The Classroom: Theme and Activities

The classroom was bright and sunny with big windows running along one side of the
room that overlooked an inner courtyard. The room also had whiteboards that completely
covered two walls, which were often used by students to write their example sentences using
specific grammar and vocabulary. The room’s capacity was for 60 students, so these 25 students
were well spread out throughout the room and often did not sit together. Sometimes, this created
problems with the general dynamic in the room when students were asked to share ideas with a
partner. However, Sophia had very creative methods of having students form groups and meet
new people. She used a deck of cards, and, for example, would have students who all had the
number ‘8’ form a group. Whenever she employed her creative strategies to group students, a
distinguishable increase in energy could be felt in the room.
The class was not conducted in traditional lecture style; rather, Sophia conducted the class in a manner that guided learners to discovering vocabulary, grammar and writing genres. Sophia frequently referred to her classes as ‘workshops’ as she thought the interactive social element was important to learning. The four themes of Personal Branding, Alternative and Complementary Medicine, Vaccine Safety and Genetically Modified Foods, were carefully woven into all teaching in order to build vocabulary knowledge and grammatical structures. Sophia drew upon student knowledge of the topic as she drew their attention to the new vocabulary. Student-generated sentences were commonly used to teach sentence structure, thesis statements, and paraphrasing.

Strategies for paraphrasing were taught Weeks 4 through 9 with a focus on synonyms, the use of collocations, the passive voice and sentence variety in order to build the skills. Time was devoted to peers being able to assess paraphrases for effectiveness and accuracy. In the initial interview, Sophia had identified paraphrasing as being challenging for students:

They really struggle with it, and who can blame them? It’s really hard to understand those ideas first of all, and then to translate those ideas, and then to translate them again, and then to actually make use of them somewhere can be really, really difficult, and then lacking in confidence, it is so tough to reword an expert. Why do you want to reword what someone else says? They prefer quoting. Direct quotes seem to be a lot better for many of them than the paraphrasing. Paraphrasing can be a real challenge. I think that it takes a lot of confidence to paraphrase, and to manipulate. I mean that is the next step. And that certainly takes place in university life – third/fourth year- you are manipulating the ideas of others to support your arguments – and I don’t mean that in a negative way. You have to argue to convey your ideas of what others are saying.

Sophia’s goal was build students’ confidence to take risks with their writing, and to do so in a way “that keeps the students coming back.” Therefore, with her humour and her passion for teaching language, Sophia created a classroom where students could increase confidence, take risks with language and develop writing knowledge. It was important for Sophia to implement a significant amount of in-class practice that engaged the learners. Every lesson had a surprise
element. As Sophia had said in her initial interview, “I have to have something crazy happen in almost every class.” Being crazy included her singing a jazz number about parallel structure, arriving in a bicycle helmet on the day that she introduced the idea of preventative medicine, and bringing in packages and seedlings of plants when the topic moved to organically modified foods. Within this lively environment, most students were motivated to learn and to be part of the banter and the activities that took place in class.
CHAPTER 5
TEACHER MODELLING IN THE CLASSROOM

When Sophia enters her class to teach, it becomes, in her words a ‘gig’ or a ‘show,’ where she uses specific discourse or “teacher talk” in order to engage the learners so that they are able to achieve a writing or grammar task. The discourse she employs while presenting teaching points is specific to the level of students and to the course outcomes and would not be the same in a different context. This chapter will take an in-depth look at this discourse during cognitive episodes as Sophia focused on the genres of course assignments: process, compare/contrast, paraphrase, summary, and argument including relevant grammar and vocabulary (See Table 4). The chapter concludes with Sophia’s reflections on her teaching and the students’ learning.

This study has one overarching research question and four other questions (See Chapter 1). This chapter seeks to answer the first two research questions:

a) How are reading and writing cognitive strategies taught in the one EAP reading-to-write course?

b) In what ways does the teacher perceive teaching reading-to-write cognitive strategies as linking to students’ writing improvement?

In this chapter, I present the data in five sections. The first four begin with a description of the writing assignment and a general overview of the teaching activities preceding it. This is followed by a short vignette corresponding to an excerpt of one teaching day for each assignment type. Each vignette describes the salient moments of teacher talk and the corresponding class activities that occurred in that one class session. Following each vignette is a frequency table depicting the three types of cognitive episodes outlined in Chapter 3: Episodes of Raising Awareness (ERA), Episodes of Strategy Explanation (ESE) and Episodes of Cognitive
Modelling (ECM), observed for the teaching activities for each assignment. I then use the *Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning* described in Table 3 to analyse and exemplify the examples of cognitive episodes. The results from the analysis are then related to relevant studies and scholarly literature. The chapter concludes with an analysis of the midterm and final interviews with Sophia in which I asked questions based on the observations.

**Process Assignment**

The first assignment in English 9001 involved writing a process essay on personal branding. Specifically, the students’ task was to write how they would brand themselves for a job interview or for colleagues. The class text defines a process essay as “explain[ing] how something is done...explains the steps in a process” (Williams, 2005, p.206). Students were assigned two readings as a pre-writing task: “Branding products” and “The benefits of brands” (p.75), both of which described how companies brand themselves. The personal branding essay was to be written as a first draft using the first person ‘I’, as the purpose for the second draft was to change from a subjective to an objective voice. The teaching activities for the first draft focused on vocabulary development and paragraph structure, while the teaching activities for the second draft focused on thesis sentence development and objective writing.

**‘Brandstorming’ Vignette**

It is the first day of the course, and students sit without speaking to each other and there is a sense of nervousness. Normally, instructors distribute course outlines and point students to the main assignments and due dates. However, Sophia has a different approach, as she places the students into groups and asks them to present sections of the outline to the class. The atmosphere in the room lightens as students come to the front and explain the important parts of the course outline, with Sophia adding any missed information.
Then, Sophia writes the word “Brandstorming” on the board. A few giggles are heard.

“You laugh at this word! What does it mean – What does it look like – You are looking at the first part of the word. What is a brand? How do we brand? Ask your neighbour!” Initially, the students become quiet again as very few students know each other. Sophia asks students to scan the article “Branding products” (Williams, 2005, p. 69) and to discuss the gist with a partner; then, she begins to elicit ideas. Sophia has a unique strategy for eliciting information from students by questioning and repeating what was said in the form of a running commentary. The discourse is upbeat, a reflection of Sophia’s high energy. She repeats any student answers as she walks from the front to the back of the class and back again. Students certainly remain focused on her. With this commentary and movement, students at the back of the class who had not heard or students who may not have understood receive confirmation through the repetition.

This is evidenced in the following interaction:

Look at the title. What does that say to you? Do you see an opinion in the title? No? I don’t! Do we see an author’s name for this article? No? Then skim through to the end of the article on p.73. Where does it come from? Griffin? Yes, Griffin. What kind of book? Yes, business. What kind of business? Yes, a marketing textbook. This is one style, one genre. You need to see patterns in writing. You need to understand the differences between writing genres to save time in reading. Yup this is about branding.

Before the students read the article, Sophia begins to activate prior knowledge on the topic of branding, first by looking at the actual word ‘branding’ and then by telling students to draw upon what they know about branding and products. Sophia constantly uses the words ‘you need to’ to inform the learners that what she is teaching will be important when students undertake the upcoming writing task. As she activates the students’ schema on branding, she intensifies her choice of words:

(T): As a grammar form what do you call “Branding” – yes, gerund. Branding – this is noun meaning the process of. Now what you need to do is think of a definition of branding. You need to be clear in your understanding of the word. That way you will be able to
understand both the article and write about branding. What do you think it means? You need to know!

(S1): Products?
(S2): Images?
(T): Images of what?
(S3): Product images?
(T): Sure...where and how?
(S1): Buyers...how they think?
(T): Now we are getting there. Could we say “project image of products” and where?
(S2): To buyers
(T): Yeah, how about “into minds of consumers?” Project image of products into the minds of consumers? Yes, that’s a good definition. Think about that. It will be important. You need to remember this. It will help you with ideas in your writing.

As further preparation for the readings, students then are placed in groups to discuss what they think the meanings of ‘brand equity’ ‘brand loyalty’ and ‘brand power’ are. More than once during the brainstorming session Sophia comments, “Start with what you know” and “We need content for your writing.” The day concludes with the students being asked to read the articles for the next class. Sophia’s final comment is to reiterate what she has said during the brainstorming session, and she reminds the students of the importance of reading to inform writing.

Time gives us separation from the reading. Start with what you know about the topic. Apply it to your reading and take that into your writing. Write in an original way and make it your own. Your ideas will come from elsewhere. You need to be informed, so you need to read. We need to have content, so we can write.

Cognitive episodes: Process essay

Table 7 shows the frequency of cognitive teaching episodes observed in the classes focusing on the process assignment, which took place in the first two weeks of the course. Table 6 demonstrates that the 50 cognitive episodes are distributed with a higher percentage of ERAs at 40 percent and a lower number of ESEs and ECMs at approximately 30 percent each. As had been noted in Chapter 3, a cognitive episode can be an utterance including a number of teaching
episodes from different categories from the *Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning.*

Table 7
*Cognitive Episodes: Process Essay (Weeks 1 and 2)*

<table>
<thead>
<tr>
<th>Type of Episode</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Total</th>
<th>Percentage of total episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERA</td>
<td>11</td>
<td>9</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>ESE</td>
<td>8</td>
<td>6</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>ECM</td>
<td>10</td>
<td>6</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td><strong>Total Episodes</strong></td>
<td><strong>29</strong></td>
<td><strong>21</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
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</tbody>
</table>

To fully examine the distribution of teaching behaviours, Table 8 shows the frequency of teaching activities occurring within cognitive episodes all of which are based on the taxonomy.

*Ideas and Information:* (1.3 Raising awareness of thinking critically), *Vocabulary* (2.3 Building awareness of appropriate academic vocabulary), *Sentence Grammar* (3.1 Raising awareness of parallel structure), *Discourse* (4.1 Essay organization) and *Regulation of Reading and Writing Task Processing* (5.2 Raising awareness of the importance of audience) were the main teaching activities. Accordingly, the following sections describe some of the excerpts from these teaching categories and relate their importance to cognitive strategy teaching.

**Schema activation and vocabulary development**

Sophia had indicated in her initial interview that students’ generating ideas for writing was one of their greatest challenges. Even though the class had been assigned readings for homework, Sophia believed that students would have difficulty in synthesising the readings into ideas for writing. As was evidenced in the vignette above, Sophia continually emphasised that students needed to start with what they know about a topic and then be able relate it to the reading. Thus, her teaching was highly directed and explicit, which involved pointing readers
towards understanding the choices that writers make (Kroll, 1993) by helping them to identify
the main ideas and support, teaching them about cohesive devices and linguistic features
(Hirvela, 2004), supporting their development of lexical knowledge (Stoll, 1995), providing
content input, and building rhetorical knowledge (Hyland, 2003; Kroll, 2003).

Table 8
*Process Essay: Frequency of Teaching Episodes*

<table>
<thead>
<tr>
<th>Categories</th>
<th>Focus on teaching</th>
<th>ERA</th>
<th>ESE</th>
<th>ECM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ideas and Information</strong></td>
<td>1.1. Ideas: Activating previous topic knowledge</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1.2. Ideas: Raising awareness of reading or listening for topic information</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.3. Ideas: Raising awareness of thinking critically about or beyond the content in readings or listening files in order to build ideas for writing</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Language below Sentence Level</strong></td>
<td>2.1. Vocabulary: raising awareness of spelling knowledge</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(Vocabulary)</td>
<td>2.2. Vocabulary: building use through collocations or synonyms.</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2.3 Vocabulary: building awareness of appropriate academic vocabulary.</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2.4 Vocabulary: building awareness of inferencing words in context, using word parts (morphology), or using explanation to determine word meaning.</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Language below Sentence Level</strong></td>
<td>3.1 Sentence grammar: Raising awareness of parallel structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Sentence Grammar)</td>
<td>3.2 Sentence grammar: Raising awareness of subordination and coordination</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3.3 Sentence grammar: Raising awareness of article and determiner use; parts of speech</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3.4 Sentence grammar: Raising awareness of the form and use of the passive voice</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3.5 Sentence grammar: Raising awareness of other grammar and punctuation</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Discourse: Language Use above</strong></td>
<td>4.1 Raising awareness of essay organization</td>
<td>6</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>the Single Clause</td>
<td>4.2 Raising awareness of text organization (genre)</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>4.3 Raising awareness of paragraphing</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4.4 Raising awareness of cohesion</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Regulation of Reading and Writing</strong></td>
<td>5.1 Raising awareness of planning the task</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Task Processing</td>
<td>5.2 Raising awareness of the importance of audience</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>5.3 Raising awareness of revising/editing text for grammar and sentence errors.</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5.4 Raising awareness of assessing ideas and structure.</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5.5 Raising awareness of summarizing/ paraphrasing</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td></td>
<td>30</td>
<td>20</td>
<td>25</td>
</tr>
</tbody>
</table>
The following teaching episodes demonstrate how Sophia endeavored to develop learner awareness of the importance of activating background knowledge of a topic before reading in order to build ideas for writing content and develop appropriate vocabulary for the topic.

Initially, as the class began, she held up a blank piece of paper and asked:

(T): What is your feeling?
(S): So empty. No ideas.
(T): Well, what is a brand? What is brand loyalty?
(S): Different categories of products that we like to buy. Buy the same one over and over.
(T): We need to get some idea about brands. (ERA, Day 2, E1, 1.1)

Sophia then asked the students to brainstorm different products and what is significant about how companies brand them. Sophia held the paper up again and commented: “That blank page is getting full – you have to think about the topic first” (ERA, Day 2, E2, 1.1).

These two episodes are ERAs, raising awareness of previous topic knowledge. As the topic was discussed, Sophia’s discourse became more explicit about the topic, allowing the students to hear specific content vocabulary while she continued to activate knowledge of branding:

There is a process in branding and there are three steps. How do we see these three steps? What can they be? I see from the readings that these three steps in the branding process are brand recognition, brand preference and brand insistence (someone sells you the project). You have to think of branding. How do you brand yourself? I have to think of how I project my image into the minds of others. What is that process? What do I do in my process? How shall I brand myself with my colleagues? (ESE, Day 2, E6, 1.3, 4.2)

Sophia’s meta-language in this ESE episode such as “I have to think” and “What do I do in my process?” allowed students to follow her thinking process and the strategies they might use when thinking about content. Various brainstorming activities followed on branding. In just half an hour, Sophia had effectively engaged the students in thinking about the topic and useful vocabulary for the upcoming assignment. At the end of this teaching segment, Sophia returned to
her original thought at the beginning of the session and held up the blank piece of paper again
and commented, “See how that blank page is getting full– you have to think about it first. Think
about what you know. Think about the language and ideas” (ERA, Week 1, Day 2, E9, 1.1).

Sophia frequently returned to “think about the language and ideas.” In another example,
she wrote a title on the board “Create a buzz for yourself on Facebook.”

(T): Why can’t we use this expression?
(S): Not academic?
(T): Right. Newspapers can use this, but not us. What could we use instead? ‘Take
charge of your electronic profile’? ‘Take charge’ is not academic either. What
synonyms can we use for ‘take charge’?
(S): Establish, control, create? (Sophia writes them down on the board)
(T): Yes! Let me think. Also, bolster, augment, better, boost, strengthen. Look how I
thought of all these words. These words are all very useful in your essay. Use
synonyms too to be more interesting. They will help your writing. We need to
remember them. Let’s try them now and write some ideas together...How about
this? Some university students use social media sites to augment their profiles in
order to attract potential employers. (ECM, Week 2, Day 2, E1, 2.2)

In this ECM, Sophia used questioning to engage the learners in thinking about vocabulary
and the usefulness of synonyms. She gave a rationale for using the words academically in essays
and proceeded to show student how to use the vocabulary in sample sentences and then provided
ample practice by having students write on the board.

Sophia continually gave a rationale for using synonyms as an important strategy for
building vocabulary knowledge. Zhang (2008) posited that it is important to explain when and
how the strategy should be used in order to raise student awareness of its importance. This is
further exemplified in Week 2, when Sophia stressed the importance of deliberately considering
the connections between the readings when writing:

What does synthesise mean? (She motions with the hands, makes them parallel). Group the ideas. Look for connections. What are the connections between the
two articles on branding? You are reading for connections. How many of you
mentioned corporate branding in your essay? Most of you did. Every time you
read, analyse each reading and then connect. You can connect when you think
about word choice the writer is using. Think about the theme and ideas. Take
notes on your readings to make connections and this will inform your writing.
(ESE, Week 2, Day 2, E3, 1.3)

As well as encouraging students to use reading knowledge to provide ideas for writing
(Hirvela, 2004), Sophia encouraged learners to become self-regulated learners. Andrade and
Evans (2013) describe self-regulated learning as a skill that can be taught. The self-regulated
learner systematically understands how to use cognitive strategies and how this relates to
motivation and focus (Zimmerman, 1990). Accordingly, Sophia systematically engaged and
couraged the students to be cognitively engaged in what they knew about the topic, what they
read and how they could implement vocabulary into their writing.

**Essay structure and audience awareness**

In a university writing course, an instructor may assume that students already have
knowledge of essay structure. It can be argued that North American writing tends to be more
linear and direct than in other cultures (Kaplan, 1996), while others claim that differences can be
pragmatic choices based on culture (Leki, 1997) or that cultural differences in rhetoric do not
actually exist (Kubota and Lehner, 2004). In the North American context, a well-written
academic text depends on organization, unity, cohesive links between sentences and paragraphs
in combination with the presentation of ideas. Sophia did not assume that her students had
knowledge of the North American academic writing style as is evident in the following excerpt.
Students had a handout of graphic illustration of boxes to be labelled as parts of an essay:

I want you to identify the parts of the essay. What do you already know about
essays? Name what you know. How have you written essays in the past? Was it
the same? What do you believe they contain? Work with a partner and write it
down. We have to think about this before we take our content and fit it into the
structure. (ERA, Week 1, Day 2, E10, 4.1)

This ERA was intended to raise awareness, and for Sophie to determine student prior
knowledge. After the pair work, Sophia explicitly modelled essay structure:
(T): Hook – What does a hook do? Interest the reader. Think of the audience first. This is just like fishing. (Sophia demonstrates by using her finger at the edge of her mouth as if it is a fishing hook). If you catch someone, you hook them. What does a hook look like?

(S): A question?

(T): Using a hook as a question? That is ‘out of style.’ Readers don’t like to be tested with a question. What else for a hook? Yes, story, background information, quotation. Paragraphs 2 and 3, what are they? Yes, content. What are the three points? Look at the chart on the course map. What’s Number 1 – topic sentence? Topic sentence is a small thesis statement. Parts of the essay repeat. Think of each paragraph as a ‘mini-essay’. You need to think of transitions to paragraphs and connect the ideas together. You need to have flow so that the reader does not get lost (Sophia moves hands to indicate flow). See how my hands move, you want your essay to do this (ECM, Week 1, Day 2, E11, 4.1, 4.4)

Sophia’s figurative language continued as she spoke about the end of the essay:

(T): Conclusion of essay. What are the two parts?

(S): Restatement of the thesis.

(T): Yes. We have to remind the reader again. What happens in the last part? Rhetorical questions are out of style. Instead have a statement that engages the reader to form their own opinions. The use of questions is a more informal style of writing in newspapers, magazines, speech writing. The clincher should point to the future. Squeeze the reader at the end. Catch and release. It is all about fishing – catch and release (ECM, Week 1, Day 2, E12, 4.1, 5.2).

In these ECMs, Sophia’s metaphor of the audience as a fish to catch and release added a new dimension to her meta-language about essay structure, which may have helped the learners remember the importance of audience. Moreover, the use of humour engaged the students in a warm and social manner.

Sophia also used imagery to model paragraph structure in her speech and by drawing a ‘picture frame’ on the board. She began by saying:

(T): I want you to think of a big picture frame rather like a big block. My topic sentence is like a mini-thesis at the top of the picture. It tells my reader where I am going. Then, I put a little more to elaborate the thesis – I give the reader some helpful background. Now I need to get to the middle of the picture and add some evidence. What does that mean?

(S): To show the value

(S): To prove the details

(T): Yes. I need to give details to give value to what I said in my thesis or my topic sentence. I need to hold up the sides of my picture frame with details. I need to
fill the centre with details just like a picture. Then at the bottom, I have the concluding sentence. This is how I kick myself out of the paragraph and maybe kick myself into the next paragraph (ECM, Week 1, Day 2, E13, 4.1, 5.2).

In this teaching sequence, rather than lecturing, Sophia continued the unique method of engaging the learners in the elements of essay structure through the use of imagery and drawing on the board. In the subsequent activity, learners analysed examples in the text and identified essay parts, practicing what she had modelled in the previous ECM.

On the following day, Sophia returned to teaching to essay structure and introduced the thesis statement.

How do we plan and create a thesis statement? Well, we need content first! Think about the reading. How are we going to create a thesis statement? We are going to work together. This allows you to think about a thesis statement – we are going to share these. What ideas were there in the reading? We need to create a road map of what we are writing about. (ESE, Week 1, Day 3, E5, 1.2, 4.1)

Mentioning the thesis as a guide or a map became another teaching point where Sophia engaged in cognitive modelling. In the next two sequences, Sophia’s cognitive engagement shifted from an ESE to an ECM. She modelled using the thesis statement written by one the students, Emma. This seemed to increase the intensity of the teaching:

You are working on content first. Emma took two ideas from the article and put them into content ‘building a brand and managing the image.’ Notice how she is parallel. She can write about how she builds the brand and then she can give reasons why. She can build on what she read. What medium can she use to brand herself and how will it be used? Yes – Facebook. This is her road map to her body paragraphs. (ESE, Week 1, Day 3, E6, 1.3, 3.1).

However, after demonstrating the student’s branding process, Sophia modelled how she branded herself, and how the students could use readings to inform their personal branding:

(T): What do you stand for? Emma is a brand. This is an English name – why did you choose it? How did you choose it? What kind of branding are we doing?
(S): Personal branding.
(T): Right! Just think...jobs – we brand ourselves for employment - we use resumes to brand ourselves. Now we need to think about it. Who has thought about it already? No one? Well you need to think about it. How do I brand myself? I brand myself
here at the school and I brand myself with my family and friends. How can we put ideas like that into a thesis statement? Look back at what Emma did, how can that help you write your own thesis? … These ideas that Emma read about have informed her so that she can create a thesis statement. The reading is the background she needs to create ideas about herself…so about myself, I can say that my personal brand contributes to my success in the workplace and relationships with family (ECM, Week 1, Day 3, E7, 1.3, 4.1).

As Hirvela (2004) pointed out teachers need to exploit how reading contributes to writing by mining ideas. Pressley et al. (2001) would describe Sophia’s interactions with Emma as opportunistic. Rather than having students just read and discuss the ideas in the class before writing an essay, Sophia continually modelled how the reading informed content.

**Creating a parallel thesis statement**

In week 2, Sophia moved from the more global aspects of essay organization to the discrete sentence level analysis of a thesis statement. Being able to write a strong, parallel thesis statement is frequently taught in EAP classes as an important element in an academic paper. However, creating two or three points with parallel structure can be challenging for learners. Hyland (2003) advocates scaffolded learning whereby teachers can explicitly provide the specific linguistic features to assist the students with writing. Often, teaching parallel structure is tied to a section in the course text such as a fill-in-the-blank activity. In other cases, instructors supply handouts with incomplete thesis statements for students to complete to create parallelism. Sophia, however, focused on the synthesis of readings in order to create the thesis.

The students had been assigned three readings and a listening file. Sophia wanted students to determine the intersecting points between the texts and synthesise the ideas of personal and corporate branding in order to create a thesis statement for their second draft of the process essay. “You are looking for points of intersection between the three readings and the listening. What is an intersection? Where do ideas cross? That’s right. Scan the reading, look for the intersections.” (ERA, Week 2, E4, 1.2).
Sophia’s method for teaching parallel structure in a thesis was very interactive as she wrote the beginning of a thesis sentence on an overhead and focused on the development of the parallel structure while thinking aloud. The following ECM demonstrates the long teaching sequence and includes a number of teaching behaviours, which are noted at the end of the sequence.

The thesis statement is to benefit both the reader and the writer – You want to tell the reader and tell the writer. It helps the reader know where you are going and it will really help you know where you are going when you write. So, what are the benefits of brands of consumers?...Brands provide customers with three benefits...So, you put in the three points.

In order to demonstrate parallel structure, the sentence depicted in Figure 2 was written on the overhead projector and the verbs were written in red. Figure 3 shows the changes Sophia made to the original sentence using different colours while thinking aloud. The following is Sophia’s discourse while she made the changes to the original sentence:

Brands benefit people in three ways: to have quality guaranteed products, to distinguish consumers products and to make (them) feel good.’

*Figure 2. Example of thesis statement to show parallel structure.*

But we need to make it stronger. It needs to be a stronger road map. We do need verb, verb, verb: to have, to distinguish, to make. What do we mean by ‘them?’ We need to identify who? That is not a clear reference! Products? No! Is it Consumers? Yes. Notice “to make consumers feel good” Notice how it is different in structure. Could we make the same structure for the third one? What word can we use for “to make feel good?” – Yes – satisfy. To satisfy customers. What can we do about ‘to have quality guaranteed products?’ Use a verb. Yes! To guarantee quality products. What about ‘ways’? That is not an academic word. What can we do? Well, let’s look at the beginning of the sentence and back at the word ‘benefits’. We used it as a verb. But I can use ‘Benefits’ as a noun. Now, a list should have the same form. Can we use something before the colon? Get rid of the colon? Yes, use ‘based on’ and now I change the verb forms to -ing. Look at the new sentence that I wrote under the other one.
Brands benefit people in three (ways): to have quality guaranteed products, to distinguish consumers products and to make (them) feel good.’

Brands provide consumers with three benefits based on guaranteeing quality products, distinguishing products and satisfying customers.

Figure 3. Demonstration on the board of making a thesis statement parallel.

We were able to get rid of the colon. We have told the reader, and we have told ourselves. When you think of this pattern, it will help you and your reader. You need this relationship. (ECM, Weeks 2. E8, 2.3, 3.1, 3.5, 4.1, 4.4, 5.2).

In this ECM Sophia exhibited a number of other teaching strategies besides teaching parallel structure and thesis statements. She began raising awareness of the need for academic vocabulary, a further challenge for the learners. They frequently may not have the breadth and depth of vocabulary to adeptly use different word forms or to be able to use synonyms easily (Hulstijn, 2001; Laufer, 1997), a problem Sophia had identified in her initial interview. Sophia also continued raising awareness of audience with her words “it will help you and your reader.”

For additional practice, Sophia used student-generated sentences to further instruct and raise awareness of strategies of how to repair faulty parallelism. Figure 4 is an example of such a sentence written on the board and then corrected by Sophia:

There are two ways to brand myself: building a good resume and a good social network.

Two ways of personal branding include building a good resume and having a strong social network.

Figure 4. Board example of original and corrected student sentence.

Notice how I added an –ing form of a verb to make it the same. That makes the verbs parallel. That’s good. Notice I got rid of the “There are”- that is not academic - and made the focus on personal branding. What about the ‘good’ being repeated? See, I changed it to ‘strong.’ What is so important about parallelism? It repeats – it helps someone remember and it makes reading easier (ECM, Week 2, Day 2, E1, 3.1, 5.2).

In summary, the first two weeks of instruction laid the groundwork for the rest of the course in terms of essay and paragraph structure. Sophia’s teaching focus was synthesising
readings, structuring essays, developing vocabulary and writing parallel thesis statements. Teaching episodes were generally explicit (ESEs or ECMs) with a significant amount of board work using student-generated sentences to support Sophia’s teacher talk. Craig (2013) would call this ‘writing-to-learn’ as it is practice and part of the routine in the class. Sophia’s vocabulary building, grammar focus and content development through these sentences are typical writing-to-learn activities, which are low stakes as they may not be formally assessed, yet they build knowledge and confidence for the actual assignment (Elbow, 1997). Craig (2013) posited that an instructor should consider the objective of the assignment and then “working backward, the teacher thinks about the stages of development the student writers must undergo to reach that goal” (p.25). This is indeed how Sophia had approached the assignment by considering the content, the essay structure, the vocabulary and the thesis statement as the main aspects that the learners needed to develop. Interestingly, it should be noted that Sophia spent little time engaging students with the textbook as a reference for essay structure, thesis statements and vocabulary development; rather, Sophia dedicated time engaging students in their own learning through the interactions with their own sentences and ideas.

Contrast Assignment

After dedicating the first two weeks to basic essay structure, building awareness of audience and developing content knowledge from readings, Sophia began to focus on the next genre: the contrast essay. She had chosen to have students write about differences only rather than including similarities as she believed students would develop better essay content. The compare-contrast genre is commonly found in university writing assignments, as students may have to compare readings, research studies or experiments, frequently in this genre, both similarities and contrasts are discussed. Johns (1993) argued that the writing tasks must be genuine to academic contexts. Furthermore, Leki (1995) described how some EAP learners were
unsuccessful in their writing in their disciplines when leaving the scaffolded environment of the ESL classroom and Leki advocated that ESL tasks should teach students the strategies for writing in other disciplines. Sophia was aware of this dilemma and of the students’ writing needs outside of the classroom. Sophia’s goal was to strive for a cohesive contrast structure, suitable word choices and to build content from readings.

The topic was based on readings from Chapter 5 of the course text (Williams, 2005), which focused on alternative and complementary medicine. The first draft in Week 3 required students to write about differences between western and eastern medicine. Students had to choose an aspect of the type of medicine they wanted to focus on and then contrast it to the other. The essay requirement was to write an introduction with a thesis statement with two points of contrast, and then to use the block method of contrast writing, where the first body paragraph described the first type of medicine, and the second body paragraph contrasted the second type of medicine to the first. In Week 4, students were asked to add a third body paragraph that focused on complementary medicine. Learners had to adjust the thesis statement and link the ideas from both eastern and western medical conventions to describe how complementary medicine is a blend of the two. Accordingly, the teaching focused on building vocabulary from the readings and creating contrastive structures through sentence variety. The vignette from Week 3, Day 2 describes some of the teaching activities and is a further example of Sophia’s use of humour to engage learners cognitively.

**Vignette: Sophia’s bag of tricks**
The day begins with the agenda written on the board:

- Sophia’s bag of vocabulary
- Reading groups, all A’s and B’s
- Sentence variety – show and practice
- Compare-contrast page
- Homework
Sophia begins with some pre-reading activities. On the white board, she writes specific vocabulary pertaining to the readings on the types of medicine (See Figure 5).

<table>
<thead>
<tr>
<th>allopathy</th>
<th>Allopathic</th>
<th>Allopathically</th>
</tr>
</thead>
<tbody>
<tr>
<td>homeopathy</td>
<td>Homeopathic</td>
<td>Homeopathically</td>
</tr>
</tbody>
</table>

*Figure 5. Vocabulary development for contrast writing.*

Sophia tells the students that paying attention to the different suffixes is a vocabulary building strategy. She explains that knowing the suffixes is a work attack strategy in a reading because the part of speech changes with the suffixes. She then discusses the meaning of allopathy versus homeopathy. She tells the students that allopathic or traditional medicine is a method of treating diseases with remedies that produce effects different from those caused by the disease itself. Then, she describes homeopathy as a method of treating diseases with remedies that produce effects similar to those caused by the disease itself. She then gives the example of nausea and in allopathic medicine examples of the drug that prevents nausea, while in homeopathic medicine the treatments could be a small dose of a natural substance that causes nausea yet also relieves the symptoms.

Sophia opens a canvas bag, which she calls her ‘bag of tricks,’ and shows specific items and designates each as examples of types of medicine being either homeopathic, western (allopathic), or alternative. The first item she pulls out is designated as homeopathic – a box of Chinese herbal tea. Then a jar of Tylenol is pulled out and the students are quick to identify it as a symbol of western or allopathic medicine. A bottle of home dried sage is designated as homeopathic, while a bottle of Buckley’s cough syrup creates uncertainty among the students. Sophia calls it alternative and explains, “What is alternative medicine? It deals with symptoms. It is all natural!”
She elicits vocabulary from the students for the types of medicine practiced in the East and the West and writes it on the board (See Figure 6). Sophia then pulls out a bicycle helmet and puts it on her head and says “What kind of medicine is this?” Amidst the humour, the students decide that it is preventative.

<table>
<thead>
<tr>
<th>Eastern</th>
<th>Alternative</th>
<th>homeopathic</th>
</tr>
</thead>
</table>

*Figure 6. Vocabulary for types of medicine.*

These pre-reading activities prepare the students for the next task, where Sophia divides the reading from the book into sections and divides students into groups to read an assigned section. She gives them a time limit to share and clarify understanding of the text. In this activity there is significantly more talking than the previous times when I had observed group work. The room has much energy, perhaps due to the humour and the way she had engaged students with her bag of tricks. The activity concludes when Sophia asks each group to write two sentences describing the kind of medicine they had read about. She announces, “Be informed by your reading. Write 2 sentences about your medicine. Look how I do this!” (See Figure 7). “OK. Follow the format I used on the board. Notice how they are parallel. You have 4 minutes to write these two sentences. Write nice general sentences of subject plus verb plus something else. You must paraphrase from the textbook. Show me you understand.” Sophia then gives each group a piece of flip chart paper in order to write their sentences. These papers are then posted on the walls around the room, and students are invited to walk around, read the statements and edit for errors. Sophia says, “You are a walking editor!”

*Figure 7. Teacher examples describing eastern and western medicine.*
Cognitive episodes: Contrast essay

Table 9 below shows the frequency of cognitive teaching episodes observed in the classes that related to the teaching of contrast writing, the second course assignment. As compared to the previous section on process writing (See Table 6), the table below shows a similar number of total episodes, 55 as compared to 50. However, there is an increase in the total number of ERAs (49% as compared to 38%) and ECMs (36.5% as compared to 28%) while the number of ESEs dropped from 32% to 14.5%.

Table 9
Cognitive Episodes: Contrast Essay (Weeks 3 and 4)

<table>
<thead>
<tr>
<th>Episode</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Total</th>
<th>Percentage of total episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERA</td>
<td>18</td>
<td>9</td>
<td>27</td>
<td>49</td>
</tr>
<tr>
<td>ESE</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>14.5</td>
</tr>
<tr>
<td>ECM</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td>36.5</td>
</tr>
<tr>
<td>Total Episodes</td>
<td>31</td>
<td>24</td>
<td>55</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 10 shows the subdivision of teaching activities based on the Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning occurring during a cognitive episode. Similar to Table 8, Table 10 indicates that teaching activities still focused on Ideas and Information, specifically on (1.3 Raising awareness of thinking critically about or beyond the content in readings or listening files in order to build ideas for writing). Another focus was Language below Sentence Level (2.3 and 2.3 Building vocabulary knowledge) and Sentence grammar, in particular (3.2 Subordination and coordination) in order to create sentence variety. The other main teaching focus was Discourse: Language Use above the Single Clause (4.1 Essay organization). Excerpts from these specific teaching moments are described below.
### Table 10

**Contrast Essay: Frequency of Teaching Activities**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Focus on teaching</th>
<th>ERA</th>
<th>ESE</th>
<th>ECM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ideas and Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1. Ideas: Activating previous topic knowledge</td>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1.2. Ideas: Raising awareness of reading or listening for topic information</td>
<td></td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1.3. Ideas: Raising awareness of thinking critically about or beyond the content in readings or listening files in order to build ideas for writing</td>
<td></td>
<td>6</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Language below Sentence Level (Vocabulary)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1. Vocabulary: raising awareness of spelling knowledge</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2.2. Vocabulary: building use through collocations or synonyms.</td>
<td></td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>2.3. Vocabulary: building awareness of appropriate academic vocabulary.</td>
<td></td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2.4. Vocabulary: building awareness of inferencing words in context, using word parts (morphology), or using explanation to determine word meaning.</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Language below Sentence Level (Sentence Grammar)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Sentence grammar: Raising awareness of parallel structure</td>
<td></td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3.2. Sentence grammar: Raising awareness of subordination and coordination</td>
<td></td>
<td>4</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>3.3. Sentence grammar: Raising awareness of article and determiner use; parts of speech</td>
<td></td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>3.4. Sentence grammar: Raising awareness of the form and use of the passive voice</td>
<td></td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3.5. Sentence grammar: Raising awareness of other grammar and punctuation</td>
<td></td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td><strong>Discourse: Language Use above the Single Clause</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1. Raising awareness of essay organization</td>
<td></td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>4.2. Raising awareness of text organization (genre)</td>
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<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4.3. Raising awareness of paragraphing</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4.4. Raising awareness of cohesion</td>
<td></td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Regulation of Reading and Writing Task Processing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1. Raising awareness of planning the task</td>
<td></td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5.2. Raising awareness of the importance of audience</td>
<td></td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5.5 Raising awareness of revising/editing text for grammar and sentence errors.</td>
<td></td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>5.6 Raising awareness of assessing ideas and structure.</td>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5.7. Raising awareness of summarizing/paraphrasing</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td></td>
<td>35</td>
<td>12</td>
<td>35</td>
</tr>
</tbody>
</table>
**Exploiting vocabulary from readings to develop writing content**

In this particular teaching segment, Sophia used the text as starting point and was able to create interesting lessons that built on the reading content. The following ERA and ESE examples of discourse are part of a continuous teaching segment on Week 3, Day 1 in which Sophia both drew upon the text in order to encourage critical thinking beyond the content of the readings and focused on aspects of vocabulary to expand its use beyond the readings. It is interesting to note in the following sequence that Sophia did not specifically model ECMs in her teaching behaviours. As she was working from the text with vocabulary lists and example sentences, it seemed difficult for her to model specific strategies as she might have done with sentences she had created herself or with student-generated sentences.

(T): Who read page 93? Look at what is listed in the chapter. How many options do we have? Two. Alternative and complementary medicine. If you have alternative medicine, what is the hidden word that is implied here?

(S): Traditional?

(T): Yes! Traditional medicine. (ERA, Week 3, Day 1, E3, 1.3. 1.2)

Sophia emphasised that students needed to think beyond the reading as it helped build ideas for writing. She wrote “Alternative” “Traditional” and “Complementary” on the board and asked the students, “What do you think the relationship of complementary is to the others? Think about what you know! Can you guess? …Yes…You can take the best from both. It comes from the word to complement.” (ERA, Week 3, Day1, E4, 1.1, 1.3).

In order to build vocabulary, Sophia asked for synonyms for the word ‘complement’ and students provided words such as ‘augment, improve, to make better, and enhance.’ Sophia had indicated in her initial interview that developing the breadth and depth of vocabulary was very important for variety in writing. On page 94 of the course text (Williams, 2005), she then referred to a list of vocabulary: traditional, conventional, unconventional, mainstream, Chinese,
complementary, alternative and holistic. The task was to divide the words into eastern and
western medicine.

Sophia engaged learners in thinking about the vocabulary and the significance it would
have when writing the upcoming essay. The following ESE included strategies for remembering
word meaning. Sophia commented:

Let’s look at the word ‘holistic.’ What is the part of speech? You can put it in
front of a noun – holistic medicine. Look how it is spelled but listen to the sound
as I say it (she writes on the board as she speaks) – whole …. hol-istic – so is it
many things working together? Yup! Easy to remember! (ESE, Week 3, Day 1-5, 2.4).

Then, as Sophia considered the word “traditional,” she wanted learners to be aware that often
word meaning has a cultural perspective that could affect the organization of ideas in an essay.

How about the word traditional! It depends on the country you come from?
Whose tradition is it? Think about medicine. What is the western perspective of
traditional? Chinese? Think about mainstream. What is it? Western medicine?
Treat the symptom not the problem. What would you write? (ERA, Week 3, Day 1,
E6, 1.3).

Sophia’s following ERA using the word ‘notice’ raised awareness of the complexity of
vocabulary and that it can vary according to the context:

What word is next? Conventional? From the western viewpoint, we would say
unconventional, traditional, holistic, alternative, complementary to describe
eastern medicine. What would you say? You are noticing that it is not black and
white. (ERA, Week 3, Day1, E7, 1.1, 2.2)

Besides focusing on the meaning and use of the vocabulary, Sophia commented more
than once about the need to read in order to build and reinforce the useful words. “You need to
read and then, it is a good idea to make a list of vocabulary from the reading. The words are
something you can use in your essay. Actually, you need to use them. You are learning to define
terms, and they will help you write” (ERA, Week 3, Days 2-8, 2.2). This comment provides the
rationale for this strategy, as students need to know not only how to employ the strategy but also
why it is important (Zhang, 2008). Later in the lesson, Sophia referred to the vocabulary and the previously discussed ideas, “We’ve got some words. We have got some background information going here. You need to read something for background information to add to it” (ERA, Week 3, Days 1-12, 1.3). Once again, the teaching strategy was to encourage students to think critically and to use the readings to build background knowledge for writing.

Sophia’s intent was to draw upon vocabulary and then use it repetitively in all aspects of teaching so that the learners could produce it in their writing. Sophia wanted students to be able to use the vocabulary in context accurately and to use synonyms to create similar meaning. Accurate contextual use became evident as Sophia focused on collocations. The following is an example of how Sophia approached and corrected inappropriate vocabulary through modelling its use in a student-generated sentence written on the board. The following ECM, in contrast to the previous ERA and ESE examples, demonstrates how Sophia explicitly modelled appropriate vocabulary use in student-generated sentences by engaging the students in her thought process (See Figure 8).

![Homeopathy treats the causes not the symptoms.](image)

Figure 8. Student-generated sentence.

(T): Treat a cause? Do you think this is a perfect word? What do we treat? Right! An illness. What other word can we use?
(S): Figure out?
(T): Well, what is wrong with that? Right! It is a two part verb and is an idiom and is not good for academic writing. What about a one word verb? Can you think of one?
(S): Kill?
(T): Can you kill a cause? No. Cure a cause? No. What word makes sense about causes? We need to think. Finds the cause? Understand the cause? Investigate the cause? Yes, they are all better words. (ECM, Week 3, Day 2, E6, 2.2, 2.3, 2.5).
It should be noted that Sophia was also raising awareness of academic writing conventions such as avoiding phrasal verbs and slang (2.5 Building awareness of appropriate academic vocabulary). From assignment one (process) to assignment two, the focus had shifted from writing using a personal perspective to being objective and not using ‘I,’ ‘you,’ or ‘one’ and instead focusing on plural nouns. Despite the students being mostly Asian, many had attended Canadian high schools and had learned slang, which they frequently used in their writing. In the following ESE, Sophia once again uses humourous demonstration as a cognitive teaching tool:

What is the problem with these words in academic writing? I call this a word alert! Remember these! Alert! Alert! (She makes beeping sounds). Things! Hard! Stuff! The words are informal and unclear. Thing and stuff are non-specific. Another mistake is people try to put ‘stuff’ in plural form – there are many stuffs affecting people’s health. Ooh, ugly!

Let’s talk about ‘hard’ in academic writing. Give me the meaning of ‘hard’ – it does not mean difficult! Knock on your head –okay everyone knock- (she waits until the students are knocking on their heads.) Now that is hard! Don’t use hard as a synonym for difficult. I’ll give you words over the next few weeks that I want you to remember and not use them in academic writing because they are for speaking. (ESE, Week 4, Day 1, E1, 2.3).

Many times during the course, Sophia referred to the word ‘get’ as being non-academic and that students constantly used it in their work. “Remember to – get the ‘get’ out. It is not an academic word. It is good in speaking. You need to think of other words like receive, become, obtain when you are writing” (ERA, Week 3, Day 3, E6, 2.3).

Sophia also seized opportunities to point out useful vocabulary that students could apply to any future academic writing. She continually reminded students to “be informed by reading.” In the following ESE, she refers to the text:

Let us look at some ‘gorgeous’ verbs in titles of the articles on page 96. Such as ‘Homeopathy offers deep and true healing.’ Or I could say ‘provides’? These are positive sounding verbs. Look at the essential verb for talking about health and pain ‘relieve.’ How about: ‘Chiropractors unleash the body’s inherent healing ability?’ Be informed by your reading – collect some of these verbs! (ESE, Week 4, Day 1, E2, 2.2)
Hirvela (2004) would call this ‘mining’ a reading whereby instructors encourage learners to be active with a text in order to gain ideas, and in this case to augment vocabulary. Hirvela also posited that instructors should demonstrate as much as possible by “using reading to create an acquisition-rich environment for writing development” (p.141). Sophia, through her explicit teaching, was engaging the learners in the kinds of activities that promote not only linguistic growth but also idea development. As much as possible Sophia raised awareness of the vocabulary use in order to allow for rich, elaborate processing and rehearsal of the vocabulary (Hulstijn, 2001). Sophia seized every opportunity to use the vocabulary, including in short sentence quizzes and grammar tests, as a means of further vocabulary reinforcement.

**Building awareness of sentence variety**

Expert writers use sentence variety, while novice writers tend to use simple sentences or depend on coordination (Grant & Ginther, 2000). Sophia continually reminded the class of the importance of sentence variety. In the next two ECMs, Sophia explicitly models and provides the rationale for having good sentence structure and variety (See Figure 9).

(T): What do I mean by sentence variety? How do I give a sentence variety?
(S): Word choice
(S): Different clauses
(T): Yes! We can have dependent clause and independent clause. What can we do with them to make sentence variety? I’ll put one on the board. Someone give me a sentence. I wrote it as I heard it. What do I add to it? Yes ‘s’ for treats and ‘s’ for symptoms. This is an independent clause. What makes it independent? Yes the subject and the verb are now a full thought.

(S) (V)
Western medicine treat (s) just the symptom (s) of an illness.

*Figure 9. Example of an independent clause.*

(T): If I put sentences like this in a row in a paragraph, how will it be to the reader? Yes, BOR-ING. What can I add to make it less boring? Yes, a dependent clause. (ECM, Week 3, Day 1, E13, 3-2)
The ECM below is another example of explicitly teaching sentence structure. Even though the class textbook had sections on sentence structure, parallel structure and sentence variety, Sophia chose to demonstrate subordination and coordination by combining simple sentences that students had written based on the reading topic. She modelled the use of the subordinator ‘because’ and then the conjunctive adverb ‘however’ and the relevant punctuation for the conjunctions. She then moved to the more complex use of ‘whereas’ and ‘while.’ Figure 10 shows the two sentences that Sophia used to demonstrate these subordinators.

Western medicine treats just the symptoms of an illness.
Eastern medicine cures causes of the illness.

Figure 10. Example sentences for creating subordination

Can you think of a way to join them? We are thinking of a comparison here. Let’s use ‘whereas’. Do you know what ‘whereas’ is? Yes a subordinate conjunction. Western medicine treats just the symptoms of an illness, whereas Eastern medicine cures causes of the illness. How about ‘while’? Where would I put it? Yes, start with an adverb. Let me read: While western medicine treats just the symptoms of an illness, Eastern medicine cures causes of the illness. Let me flip it around. Western medicine treats just the symptoms of an illness, while Eastern medicine cures causes of the illness. Does it mean the same? Yup! Notice I need a comma when the dependent clause is second when I am showing contrast. I always need to think if I need punctuation in my sentences. (ECM, Week 3, Day 1, E14, 3-2)

After this effective modelling of how to create sentence variety, Sophia asked student pairs to continue combining other student-generated simple sentences written on flip chart paper around the room. For scaffolding, Sophia left the examples she had written on the board. The feedback session revealed that students had joined the same two sentences in various ways, demonstrating their understanding of sentence variety.

At this time, Sophia continued her explicit modelling when correcting errors in student-written sentences. The ECM example and the sentences shown in Figure 11 below demonstrate Sophia’s attempt to cognitively engage the learners in her thought processes:
Many alternative therapies are now not only scientifically documented to be cost effective but also medically effective. Many alternative therapies are now scientifically documented to be not only cost effective but also medically effective. Equal chunks of same type of language = parallel.

Figure 11. Sentences on the board to demonstrate parallel structure.

It is beautiful because you made a beautiful mistake. This is a correlative conjunction. You do not need to remember the name. You just need to remember how to use it. This is not parallel. How do we fix this? Watch what I do.

Why did I do this? You need to think why! You need to understand why I did it. When you are listing, it must be in the same structure. You have to think as you do this kind of sentence. See how it reads now ‘are now scientifically documented to be not only cost effective but also medically effective.’ Or you can switch the ‘cost effective’ and ‘medically effective’ around. (ECM, Week 4, Day 1, E4, 3.1, 3.2)

The board work with arrows and colours also reinforced the teaching of parallel structure and sentence structure. Sophia always welcomed student mistakes with enthusiasm and frequently called them ‘beautiful’ or ‘gorgeous’ as they became a conduit for more teaching and learning. Teaching sentence structure by using the necessary vocabulary for the up-coming essay was further reinforcement for the learners. This scaffolding from the expert to the novice showed students how to learn, and the repeated practice allowed students the opportunity to proceduralise and internalize the new knowledge (Vygotsky, 1978). Sophia also consciously created an environment where taking risks and making mistakes created learning opportunities (Pressley et al, 2001).

Modelling essay organization

Even though Sophia had taught essay organization in the first two weeks, she felt that student essays needed better developed introductions. Accordingly, she utilised a well-written student example to demonstrate a successful introduction, while also generating a learning
opportunity through discussing how it could be improved. The following ECM is an example of Sophia thinking aloud and modelling so that all five categories of main teaching activities from the taxonomy were incorporated. The example (See Figure 12) is an introduction written by a student that Sophia believed to be her strongest writer. Even though the original draft had been hand-written during the process assignment, Sophia had typed this introduction and printed it on an overhead for all the students to see.

Traditionally, the practices of branding have been reserved for corporations. People repeatedly return to products such as Nike shoes and Sony televisions, for they recognise the superior value and quality symbolized by the brand logo. In today’s digital information world; however, personal branding is becoming as important as corporate branding. Personal branding is gaining prominence because it distinguishes individuals from the crowd so that they can compete and better promote themselves. Personal branding can be done via electronic media such as social networks and personal websites.

Figure 12. Example introduction from a student.

Sophia read the first sentence and said:

I know there is synthesis from the readings. However, the word ‘people’ is too distant in the second sentence. What would be better? Yes, consumers. This sentence has two examples of corporate branding; great use of the brand logo. This example has sentence variety. Yes! I see coordination and subordination. Also, I am feeling good as a reader because I know where the writer is going. Let me read this thesis!

‘Personal branding can be done via electronic media such as social networks and personal websites.’ Nice thesis statement and it is parallel. I know what to expect in the first and second paragraphs of the essay.

Now I want to go back to that sentence starting with ‘Personal branding,’ and I would move the word ‘because.’ What is causing or influencing? Is it not the prominence? I think I have to move the ‘because’ to the beginning of the sentence. This adds sentence variety and also makes it clearer. How does it sound now? ‘Because personal branding is gaining prominence, it distinguishes individuals from the crowd so that they can compete and better promote themselves.’ Yes, that is better.” (ECM, Week 3, Day 3-2, 1.3, 2.3, 3.2, 4.1, 5.2, 5.3, 5.4)
Through this ECM, Sophia was able to demonstrate the importance of a thesis statement guiding the audience. She reiterated that the readings had informed the writing, and that the inclusion of the examples Nike and Sony came from the student’s own experiences. However, this example was taken from the previous process assignment. Despite this introduction having the essential elements of a hook, background information and then a thesis, the students were writing a contrast essay that day; therefore, Sophia wanted to demonstrate a contrast thesis structure. The following ECM describes Sophia’s explicit modelling:

Here is another example of a thesis. Look at it carefully as I read it. ‘A great number of people are turning to alternative medicine of preventing illness and alleviating symptoms.’ It is not a perfect road map. You need to mention the other medicine in this sentence to show you are comparing. We need to have the comparison point in the thesis. So what am I comparing the alternative medicine to? Right, mainstream. I need to show that comparison. I need to add the comparative words to the thesis. How is the alternative different, Hmm. Simpler? Maybe. Safer? For sure. Okay, I’ll write this.

A great number of people are turning to alternative medicine because it provides simpler and safer methods of (1) preventing illness and (2) alleviating symptoms than mainstream medicine does.

See! I numbered the two thesis points, so I know what to focus on and not wander off the path. Last week some of you wandered off the thesis path. Today, you will be comparing two different kinds of medicine with two points. (ECM, Week 3, Day 3, E3, 4.1, 4.2)

This episode was very explicit in modelling a thesis sentence for a contrast essay, and, interestingly, Sophia left the sentence on the board to scaffold the learning, yet cautioned students that they needed to generate their own ideas and two points.

The following week, the students had to write the second draft and add an additional paragraph about complementary medicine. Sophia began first with the content. In her initial interview, she had indicated that without the content and the language the students would be “up against a wall.” Even though the students had read the text and listened to the files, Sophia still focused on content development.

Now let’s talk about the content. You need to think back to the listening file. What is the purpose of complementary medicine? What is a form of
complementary medicine? Meditation? Where do we use it? For stress? Heart
disease? Yes, and with drugs and surgery, it could speed healing. How about a
slipped disc? Have surgery, take drugs and then use meditation with massage and
yoga. These are all ideas that you can use in this essay. You need to add ideas
besides the reading. Just think about depression. Drugs are used in western
medicine, and in complementary medicine, music therapy might help as it is a
form of relaxation. Is everyone sure about what complementary medicine is?
(ESE, Week 4, Day 3, E3, 1.3).

These comments led to Sophia writing a statement on the board (Figure 13):

Complementary medicine is different from Western and Eastern medicine because it
combines/integrates both philosophies.

Figure 13. Example thesis sentence incorporating complementary medicine.

Interestingly, Sophia did not tell the students that this was an example of how to develop
a thesis statement for the second draft. Sophia even left the sentence on the board along with
relevant vocabulary when the students wrote. For her, this became an indication of the depth of
the students’ learning and whether they were able to generate a thesis that integrated content,
sentence variety and good vocabulary so they could, as Sophia said, “…make it their own.”

Being an editor

When employing reading and writing strategies, regulation and evaluation of the task is
an important and ongoing process (Pressley and Afflerbach, 1995; Grabe and Kaplan, 1996).
Readers need to assess the success of comprehension, while writers need to evaluate the success
of the writing task, including assessing the content and editing the text. Every week, Sophia
spent a significant amount of time explaining language and writing strategies by using student-
generated sentences as the teaching tool. Much of the time, she focused on the language prior to
writing an assignment. Occasionally, she focused on the strategies for editing as well as
approaches for evaluating the accuracy of the language. Even though the data only reveal three episodes of editing strategies in these two weeks, the following episodes are compelling.

The following ERA precedes the ECM. Sophia had taken student sentences from the first drafts of the compare-contrast essays and written some on the board (Figure 14):

![One should always seek help from his medical practitioner.](image)

*Figure 14. Example sentence from student contrast essay.*

Don’t use ‘one’ – use third person plural. You need to avoid using ‘one’. The best way to avoid the problem is to learn how to avoid the problem. Learn from your mistakes. Learn what they are and then avoid them – you need to run away from them. But you have to always check to be sure that you did not make the mistake over again. (ERA, Week 4, Day 1, E7, 5.3)

In the previous episode, Sophia raised awareness of the importance of understanding mistakes, yet in the next episode (See Figure 15), she modelled how to find a subject-verb agreement error:

![Everybody should always seek help from their medical practitioner. Patients should always seek help from their medical practitioners.](image)

*Figure 15. Sentences used for editing strategies.*

Now let us learn from this mistake. It is best to try to use plural nouns, and then you can use pronouns such as ‘their.’ What should I have here? Well, patients would be good, but then I have to think with ‘their’ I would also say medical practitioners. Patients…..more than one practitioner. When you are reading, you need to be aware of the pronouns that authors use. Here are some thinking tips for writing sentences. You have to have time to edit. If you start with noun phrases or adverbials, you have to look further down the sentence for agreement. Think of this sentence: “Because conventional medicine’s philosophy places the doctor in a position of power, they don’t spend time getting to know their patients well.” You have to look further down the sentence, and back to the beginning. So, I have to say doctors, and not doctor.
If you have a long complex sentence, count the nouns. If there is more than one main noun, be careful not to confuse the reader with an unclear pronoun, so you may have to repeat the main noun. This is so fundamental in editing – you have to read all the way down your sentences. (ECM, Week 4, Day 3, E8. 3.5, 5.3)

In summary, Weeks 3 and 4 had compelling episodes of cognitive teaching. In most instances, Sophia began with an ERA and then progressed to an ECM. She used a significant amount of rich content from readings or from students’ writing, thereby engaging them in their material. Students were very actively involved in these lessons and often had many questions. Craig (2013) points out that good writing lies not in the actual writing task but in the ideas, the critical thinking and creative engagement in the reading material beforehand. Even though Sophie’s goal was to cognitively engage the students so that they were prepared for the writing task, the two weeks consistently included moments such as those described in the vignette whereby Sophia allowed her sense of humour to direct some of her teaching.

**Paraphrasing and Summarizing Assignment**

During Week 5, Sophia reviewed for the midterm, and the students wrote an essay for their midterm exam on the third day. Following the midterm, Sophia’s objective in Week 6 was to teach paraphrasing and summarizing, essential academic skills needed for avoiding plagiarism. In universities, plagiarism is sometimes problematic for ELL students. Plagiarism may be especially challenging for students to avoid when reading online text as their language skills may be such that “textual borrowing strategies” (Hirvela, 2004, p.25) are not well-enough developed to paraphrase effectively. In academia, plagiarism is a punishable offence. Students often attempt a paraphrase but due to linguistic weakness or lack of vocabulary, students may generate texts that are inappropriately similar to the original text, which is known as patchwriting (Andrade & Evans, 2013). However, Li and Casanave (2012) claim “If novice writers do not
intend to deceive, they should neither be punished nor labeled plagiarists, but educated, through example, explanation, and a great deal of practice” (p. 178). Sophia was well aware of the difficulties students encounter when attempting to paraphrase, so her teaching in Weeks 6 and 7 focused on practice activities using vocabulary and the passive voice as strategies to avoid plagiarism.

The assignments for the two weeks were first to paraphrase pages 125-126 (lines 42-58) of the course text (Williams, 2005). The topic was vaccine safety. For the second assignment the students had to summarize lines 42-85 (seven paragraphs). The section from the reading had a significant number of data regarding the vaccines, so Sophia’s expectation was that only the main ideas of the seven paragraphs would be summarized.

**Vignette: The paraphrase challenge**

This vignette is taken from Week 6, Day 2 and describes Sophia’s approach to beginning to teach paraphrasing. Sophia begins the session by saying:

> Today is very important for this week and next week. Yesterday, we had great insight about how to paraphrase. What do we do? Right – we read it and put it aside. Take a break from it, so you think about it. You can’t paraphrase well if you don’t know it or understand it. Then, you write down what you remember. Paraphrasing is like a mini-lecture. Now, I’m going to read something to you and I want you to take some notes.

Sophia reads the following to the class from an article entitled *B.C. babies get 6-in-1 vaccine* (Globe and Mail, 2009, February 27).

> Babies in British Columbia are now receiving a six-in-one vaccine, the latest innovation designed to reduce the number of shots kids get while maximizing protection against infectious diseases (para 1).

She reads the excerpt twice and asks the students to first work alone, refine their notes and redraft the ideas as a paraphrase. Once they are satisfied with the paraphrase, they can share it with a partner. Sophia asks the pairs to look at the sentences for similarities or differences in comparison to the original text and to look for mistakes as well. She then asks the class, “How
many of you started with ‘Babies in BC?’ How many of you ended with ‘against disease?’ How many of you used ‘now receive? Well?’ Many of the students nod their heads, and a number of students confidently raise their hands that they had used such wording. Sophia smiles and says, “Well, if you used any of these words, then you are too close to the original.” A collective ‘oh’ is heard in the room, but Sophia reassuringly tells the students that they can develop some paraphrasing strategies. She first reviews the steps of paraphrasing (which are listed in the textbook) by reminding students that the first step is to use synonyms, and the second is to change word order. Sophia asks one of the students to write her sentence on the board (See Figure 16). Sophia proceeds to underline some paraphrasing errors in the sentence and to analyse the quality of the paraphrase by thinking aloud (See Figure 17):

A 6-in-one is now injected into babies in B.C. It is decreased the number of shots and maximize immunization against disease.

Figure 16. Example student paraphrased sentence.

(T): What is nice here is that you have two sentences, and you can do this when you paraphrase. You have passive voice ‘injected into.’ Does anyone know a synonym? A shot? What about ‘It is decreased?’ – What do we do with that?
(S): It decreases?
(T): Yes, it decreases. Now when I look at the sentence, I think I must use the word ‘injection’ to avoid confusion with ‘it.’ What about ‘maximize immunization’?
(S): I’ll use my special word ‘augment.’
(T): Oh that’s good. Augment immunization against disease. There are so many ways to paraphrase. Now, 6-in-1 is a set phrase. Can we change it? You could say ‘multi-purpose.’ Now, for general readers, do they need to know it is six vaccines? No. Look at the changes we made. Now our sentence is...

A 6-in-one is now injected into babies in B.C. It is decreased the number of shots and maximize immunization against disease.

A multi-purpose vaccine is injected into babies in B.C. This injection decreases the number of shots and augments immunization against disease.

Figure 17. Revision of student paraphrase.
Now, we need to step back again. Paraphrase is not a dictation. We have to write down and revise. We have synonyms, changing sentence structure, and now we have passive. What is passive? Yes, something received an action. In our sentence, it is ‘to be plus a verb with ed.’ Why is passive important in academic writing? Yes, it is a good verb to use because you can report what happened.

Sophia then mentions that the paraphrase is still not perfect because there is still similarity to the original with phrases such as ‘against disease’ and ‘into babies in B.C.’ However, she again reassures the students and explains that there are many steps to a good paraphrase and that the next step is to focus on the use of the passive voice.

**Cognitive episodes: Paraphrasing and Summary Writing**

Table 11 below shows the frequency of cognitive teaching episodes in Week 6 and Week 7. The total number of episodes is 47, which is similar to the previous two data sections (Tables 7 and 9), which were 50 and 55 respectively. However, the percentage of ECMs was significantly lower (19%) than in the previous two assignments (32% and 36.5% respectively). Accordingly, there was an increase in ERAs to 56% from 40% and 49% respectively.

<table>
<thead>
<tr>
<th>Episode</th>
<th>Week 6</th>
<th>Week 7</th>
<th>Total</th>
<th>Percentage of total episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERA</td>
<td>17</td>
<td>9</td>
<td>26</td>
<td>56</td>
</tr>
<tr>
<td>ESE</td>
<td>9</td>
<td>3</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>ECM</td>
<td>6</td>
<td>3</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>Total Episodes</td>
<td>32</td>
<td>15</td>
<td>47</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 12 analyses the teaching activities occurring during the cognitive episodes. As can be seen, teaching activities focused on (2.2 Building vocabulary), (2.4 Passive voice), and (5.5 Raising awareness of summarizing/paraphrasing). These activities are described and analysed in the subsequent sections.
Vocabulary development in paraphrasing

When paraphrasing a text, readers need to have many skills and strategies as well as rich vocabulary knowledge. Even if sentence structure is changed, utilising the same vocabulary as the original text could result in plagiarized work or patchwriting (Li & Casanave, 2012). Thus, Sophia began the week by emphasizing the importance of strong vocabulary skills:

I can’t stress enough the importance of vocabulary this week because we will be only focusing on paraphrasing. Your assignment will be a paraphrase and we will learn how! You need to have a bank account of synonyms for paraphrasing. (ERA, Week 6, Day 1-1, 2.2, 5.5)

Table 12
Paraphrasing and Summary Writing: Frequency of Teaching Activities

<table>
<thead>
<tr>
<th>Categories</th>
<th>Focus on teaching</th>
<th>ERA</th>
<th>ESE</th>
<th>ECM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideas and Information</td>
<td>1.1 Ideas: Activating previous topic knowledge</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1.2 Ideas: Raising awareness of reading or listening for topic information</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1.3 Ideas: Raising awareness of thinking critically about or beyond the content in readings or listening files to build ideas for writing</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Language below Sentence Level (Vocabulary)</td>
<td>2.1 Vocabulary: raising awareness of spelling knowledge</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2.2 Vocabulary: building use through collocations or synonyms</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2.3 Vocabulary: building awareness of appropriate academic vocabulary</td>
<td>6</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2.4 Vocabulary: building awareness of inferencing words in context, using morphology, or using explanation to determine meaning</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Language below Sentence Level (Sentence grammar)</td>
<td>3.1 Sentence grammar: Raising awareness of parallel structure</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3.2 Sentence grammar: Raising awareness of subordination and coordination</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3.3 Sentence grammar: Raising awareness of article and determiner use; parts of speech</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3.4 Sentence grammar: Raising awareness of the form and use of the passive voice</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>3.5 Sentence grammar: Raising awareness of other grammar and punctuation</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Discourse: Language Use above the Single Clause</td>
<td>4.1 Raising awareness of essay organization</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>4.2 Raising awareness of text organization (genre)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>4.3 Raising awareness of paragraphing</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>4.4 Raising awareness of cohesion</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
For students to build this ‘bank account of synonyms,’ Sophia needed to raise awareness of specific strategies for vocabulary development. The following ERA focuses on the importance of parts of speech. In order to effectively paraphrase, learners need to be able to identify the part of speech and change to another form.

What is a part of speech? They are very important for paraphrasing. I want you to think about what the word is doing in the sentence. I want you to decide what part of speech it is. (ERA, Week 6, Day 1-2, 3.3)

To demonstrate this, the Sophia referred students to an exercise in the course text on page 121 (Williams, 2005). The following ECM demonstrates how Sophia used strategies to decipher a part of speech through the context. In this episode, Sophia read sentences from the text, and thought loud about the parts of speech. (Note: targeted words are in italics):

‘The doctor filled the syringe with the vaccine.’ Hmm. ‘With the vaccine’ If you are not sure, then you look back up the sentence and see that there is an article. So we know it is a noun. How about in the second sentence? ‘The idea that the vaccination might prevent disease began with an English doctor who noticed that once people had recovered from a disease, they did not contract the same disease again.’ What is the part of speech for ‘vaccination’ Right, it is a noun. What is the clue? Right ‘-tion.’ What about the word ‘contract’? Listen to my word stress; it is on the second syllable. What is it? Verb. Right. Use this knowledge to help you when you are figuring out vocabulary. (ECM, Week 6, Day 1, E3, 2.4, 3.3)

Sophia guided the students through two more examples and then asked students to employ the strategies to the rest of the sentences in the text.
Since the topic for the week was the vaccine safety, Sophia attempted to raise awareness of the need for building knowledge of synonyms in order be successful in the paraphrasing task. “This is very important to the work for this chapter. We have a lot of words that are similar! We will build a bank account of words. We need to group the words” (ERA, Week 6, Day1-6, 2.3).

The following ECM demonstrates how Sophia stressed the importance of the vocabulary by not only referring to the parts of speech but also to several collocations. The following chart (Figure 18) was written on the board:

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Nouns</th>
<th>Adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>immunize</td>
<td>immunization</td>
<td>adverse</td>
</tr>
<tr>
<td>vaccinate</td>
<td>vaccination</td>
<td>negative</td>
</tr>
<tr>
<td>inoculate</td>
<td>inoculation</td>
<td></td>
</tr>
<tr>
<td>inject</td>
<td>injection</td>
<td></td>
</tr>
<tr>
<td>contract</td>
<td>contraction</td>
<td></td>
</tr>
</tbody>
</table>

*(Figure 18. Collocation chart for paraphrasing assignment.)*

(T): Look how the words are grouped into the parts of speech. Where can you use adverse? What words does it go with? Yes, ‘adverse reaction’ and ‘adverse effect.’ You can use the same words after ‘negative.’ Look at the list of words. Look how you can make the verbs into nouns. What about the word ‘contract?’ What can you use after it?
(S): Contract a muscle?
(T): Yes. Contract a disease, contract an illness or a sickness. What is a synonym for ‘contract’ with disease – yes ‘get’ – but that is slang - or even ‘catch.’ How many people have been vaccinated? How many people have a scar from the inoculation?
(S): They use the non-dominant arm for the injection.
(T): How many of you were immunized against the childhood diseases? Notice how I used ‘against’ with the verb ‘immunize.’
(S): Immunized against measles?
(T): Yes, look at all the vocabulary you are using as we are talking. (ECM, Week 6, Day 1, E7, 2.2, 2.4, 3.3).

Rather than initiating the lesson by having the students undertake a complicated reading on vaccines, the teaching strategy demonstrated above skillfully employed the vocabulary in context and in natural speech. Furthermore, this activity not only prepared students for the readings, but also increased knowledge of synonyms for ‘vaccination.’ Sophia and the class
analysed the readings and continued to build vocabulary and added to the ‘bank’ on the board. She encouraged the students to create their own ‘banks’ not only from list on the board but also from the readings.

**Paraphrasing and summarizing**

Paraphrasing and summarizing are categorized within the regulation of reading and writing task processing, as they require readers and writers to continually assess the success of the task. Bereiter and Scardamalia (1987) would identify successful summarising and paraphrasing skills as ‘knowledge telling’ with the reader being able to skillfully alter the texts linguistically, yet maintain original meaning. In contrast, according to Bereiter and Scardamalia, ‘knowledge transforming’ is being able to summarise and paraphrase and create new meaning by synthesizing and assessing the texts, for example, in a critical summary or a literature review.

The sophisticated skill of paraphrasing and synthesising or transforming ideas is a key element in many academic assignments.

In week 6, Sophia began with an ESE:

(T): Now we need to think about paraphrasing. I should ask you. What is a paraphrase? Yes it is to restate. Re – is a good way to think about this. Re-write. Re-tell. Re-phrase. Why bother? Why rephrase? Why can’t we use that is if the original person wrote it so well?

(S): Plagiarize

(T): That’s right. It is to avoid plagiarism. What if you get caught plagiarizing? Yes, you can get kicked out or you can get zero. Many students think they can use what is there.

(S): Quoting?

(T): Yes, you can quote and give the source, but you can’t do it all the time because you will drive the reader nuts. (ESE, Week 6, Day 1, E13, 5.5)

In this ESE, Sophia provided rationale for effective paraphrasing in order for students to understand the serious consequences of plagiarism. However, the ability to paraphrase well is a learned skill, and without this skill unintentional plagiarism might occur (Li and Casanave, 2012). Sophia indicated in her initial interview that students attempt to paraphrase; yet the text
remains similar to the original. This could be defined as patchwriting, which is "copying from a source text and then deleting some words, altering grammatical structures, or plugging in one-for-one synonym-substitutes" (Howard, 2003, p. 213). However, for many students this should be described as a transitional phase in writing rather than a breach of academic integrity (Howard, 2003; Pecorari, 2003).

Knowing the paraphrasing problems students encounter, Sophia continually reiterated the steps in each lesson. The following ERA is from the beginning of the week:

So when we paraphrase, we need to change the sentence type, change the active to passive, change the parts of speech. Also the most it important is that we look at the sentence structure. We need to change it. Read the sentence, go away from it and write it as you remember it. Maybe when you look at it, you have to look at parallelism. (ERA, Week 6, Day 1, E15, 3.1, 5.5)

Sophia’s next area of focus was the passive voice as a paraphrasing strategy used in conjunction with the vocabulary from the chapter. Sophia asked various students to write sentences on the board, and then she commented on them. Many of the teaching episodes were ERAs as in the example below. Sophia read and then commented:

‘Most of the needles had been sterilized.’ We have passive here. How do we switch back to the active? What is the subject? Right the nurses disinfected most of the needles. Yes, ‘nurses’ is the subject. Do we need it in the passive form? No? Why? Right, we know nurses do this. (ERA, Week 6, Days 2, E6, 3.4)

When the opportunity arose for more explicit teaching of the passive voice and vocabulary use, Sophia focused on collocational usage. Figure 19 shows the sentences that were written on the board by students.

### Figure 19. Passive voice practice.

| Melissa’s injection was used to protect her against chicken pox. |
| Melissa’s injection was performed by the doctor. |

Let’s do sentence number two. This one is tricky when you are thinking of the verbs. The first sentence is great. Look at the second. Let me think about this one. The passive is great. What about the verb choice of ‘perform?’ We need a better collocation. We use the word ‘performed’ when we talk about surgery and
operations. Doctor’s perform an operation. What verb can we use? I think I should use ‘give’ - this is a strong collocation for the word needle or injection. You need to think of these collocations. (ECM, Week 6, Day 2, E7, 2.2, 3.4)

Once Sophia had focused on vocabulary and passive structures, and she had provided students an opportunity to practice paraphrasing, she wrote sentences on the board and some students were asked to write their paraphrases beneath the original. Once again, Sophia seized opportunities to model and think aloud. Figure 20 shows an example of the one of the original texts and the paraphrased sentence written on the board.

<table>
<thead>
<tr>
<th>Original</th>
<th>Paraphrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccines are safe for almost everyone although very rarely there are people who experience adverse reactions</td>
<td>No side effects should be experienced after vaccinations; however, exceptions are still possible</td>
</tr>
</tbody>
</table>

*Figure 20. Good example of a student paraphrase.*

Look at the original sentence and look at what your classmate wrote, and think about what steps he took to paraphrase. Yeah! He changed sentence structure. A good indicator is how he used the conjunction ‘however.’ Also, he changed words...What is that called? Yes, he used synonyms. Did he change the parts of speech? Sure did! Look at that passive! (ESE, Week 6, Day 3, E1, 5.5).

Sophia continually presented the steps to successful paraphrasing to students through ongoing reminders and questioning. The following ECM demonstrates how Sophia analysed a poor paraphrase of the same original text as is in Figure 20. Sophia read:

‘Negligible adverse reactions are felt by a minority of people.’ Is this passive? Yes! Who experiences? The people! What is the subject? Adverse reactions? What does negligible mean? Oh, it means very few. Does this have the same idea as the original sentence? Do we know what the adverse reactions are to? No? So we would need to add something about vaccinations. You need to be clear. When I am done, I need to go back to the original to make sure I have the essence of the idea. Sure, paraphrasing is very individual, but the big problem is your opinion. You can’t put it in. Don’t say anything about what you think! (ECM, Week 6, Day 3, E2, 3.4, 5.5)

In this ECM, Sophia demonstrated a think-aloud process by pointing out the passive verbs and vocabulary, while drawing attention to other aspects of paraphrasing such as keeping
the essence of the original text and not adding personal opinions. Week 6 was rich in ESEs and some ECMs; however, in the following examples in Week 7, Sophia’s teaching behaviours changed to having fewer episodes and even fewer ECMs (5 in Week 6 and 3 in Week 7).

Day 1 and 2 of Week 7 were a continuation of editing student-generated sentences for ineffective use of the passive voice as well as punctuation errors. As homework, students were required to read the text and listen to sound files on the topic of vaccines as preparation for the assignment. Unfortunately, many students in the class did not do the required homework, and Sophia found it difficult to conduct the class in her normal manner. Her plans were to have students write collaborative summaries of sound files or readings. Sophia became less cognitive in her teaching in Week 7. In her midterm interview, she shared that she was frustrated with the students as she could not engage with them as she usually did. The following sequences of teaching activities show this shift to a more lecture style, teacher-centred approach.

Sophia began Day 3 of Week 7 in her usual manner of engaging the class with students providing the input and Sophia teaching from it. Figure 21 shows a partial summary sentence from the sound file (Williams, 2005) that Sophia had written on the board and students were required to complete it.

As the narrator explains in the sound clip ‘Temporal versus causal relationships,’ vaccine safety is analysed........

Figure 21. Summary sentence from sound file (Williams, 2005).

(T): What was the main idea of this sound file? What was the purpose of the sound file? We can even think of this as a thesis statement.
(S): It is to show how safe vaccination is.
(T): Who is the speaker addressing?
(S): Mothers of babies.
(T): What does temporal versus causal mean?
(S): Temporal just happens and causal is that A causes B.
(T): Okay, so the key to writing a summary is to state the main idea first. So, look at the statement on the board and complete it to show ideas of both vaccine safety and the
temporal causal relationship. It is important to begin a summary with this statement. (ESE, Week 7, Day 3, E1, 1.3, 5.5).

Sophia observed that most students were not doing the task because they had not listened to the sound file. Only two or three students had completed the homework task, so Sophia asked one of them to write the summary sentence (Figure 22) on the board:

‘As the narrator explains in the sound clip ‘Temporal versus causal relationships,’ vaccine safety is analysed by the study temporal and causal relationship to help parents who worry about adverse reactions.’

Figure 22. Student summary sentence.

Let’s look at the summary sentence that Jenna wrote. What would you do to refine this? Do we need to say she ‘explains’ and ‘is analysed?’ Right, we need to add the words ‘how’ before ‘vaccine safety is analysed’. Also, I have to take out ‘As’ – this makes the sentence complete. (ESE, Week 7, Day 3-2, 5.5)

At that point it seemed that Sophia had made a decision not to proceed with any further modelling or practice. Instead, in the following ERA, Sophia’s discourse shifted to just telling the students about summary writing:

This is a very important step – and you have to do it today. You have to follow the academic convention. You have to have a strong main idea. In a summary, do you have to list six very detailed steps? No. It is important to remove details and statistics. This is different to a paraphrase. Your paraphrase is the same length as the original. In a summary, make it one quarter of the length of the original…and the main idea all comes from the first sentence. (ERA, Week 7, Day 3-3, 5.5).

She did not use her unique method of questioning students to engage them in the materials, nor did she use phrases such as ‘Let’s look...’ or ‘think’ or ‘remember’ or ‘you need to’, as had been demonstrated in so many of her previous teaching behaviours. She also did not model approaches to writing a summary other than showing the one main sentence from Jenna. She continued her teacher-centred discourse:

Let me tell you what a summary should not have. Don’t put in your own ideas. Make sure there are no details or statistics. You must erase yourself from the summary. The next step would be your analysis, but remove yourself from the summary. What you must do is mention the author, state the article name, oh
Yeah, write in third person. Use simple present. Look at the summary handout. In the last assignment, some of you summarized instead of paraphrased. Those who paraphrased well are in a good position to write a summary. You just have to leave out what is not important. You have the rest of the class for this. (ERA, Week 7, Day 3, E4, 5.5)

In conclusion, Week 6 presented interesting data, with a variety of ERAs, ESEs and ECMs, especially in the presentation of vocabulary and the passive voice. Sophia used student-generated paraphrases to analyse the effectiveness of the paraphrase and the language used. The paraphrasing strategies that Sophia taught were knowledge telling (Bereiter and Scardamalia, 1987) as the practice was a strict representation of a small excerpt of a text rather than the integration of ideas from many texts, which would be knowledge transforming (Hirvela & Du, 2013). Craig (2013) stated that writing-to-learn strategies in conjunction with teacher guidance build paraphrasing skills and encourage writers to reflect and revise as they paraphrase. Sophia gave ample practice and strategies for students to learn to paraphrase, knowing that this was a step towards avoiding plagiarism, which would be a knowledge telling activity (Bereiter & Scardamalia, 1987).

However, Sophia’s shift to less cognitive modelling with fewer think-alouds in Week 7, created a different atmosphere in the class whereby it was difficult to assess if learning was occurring. Even though the learners’ attitudes towards Sophia remained positive during the class, students seemed to have little cognitive engagement as Sophia essentially told rather than showed them how to summarize. For cognitive modelling to be effective, it is essential to show how and to explain why strategies are important (Cumming, 1995, Wenden, 2002, Zhang, 2008). However, when the students are not prepared or not motivated to learn, it “affects the outcome of the intervention” (Craig, 2013, p.139). The teaching energy in the classroom changed, and Sophia lost her motivation.
Argument Essay Assignment

Writing an argument is another common type of university writing. Describing a process, comparing and contrasting results and then presenting an argument to a reader are common combined elements in academic writing. Hirvela (2004) commented that argument writing is “very culture bound, with notions of acceptable argumentation varying widely” (p.128), and he suggested that mining a model text is important for connecting the format of the reading with the type of language needed for the writing. In Weeks 8 and 9, Sophia’s focus was to teach the language pertaining to an argument and the genre. She often referred to not ‘pushing opinion on the reader’ and always ‘being respectful of the readers viewpoint’ by conceding the other side of the argument before refuting it. In these two weeks, contrary to the previous week, Sophia returned to her unique method of modelling as she taught.

The assignment was to respond to the essay statement on page 180 of the course text (Williams, 2005) ‘Genetically modified foods benefit only farmers.’ The chapter had two readings that were divided into four and five sections respectively so that an instructor could use the readings for group work by assigning a section per group. The text also had an accompanying sound file, which Sophia assigned as homework. The students were told on the first day of Week 8 what the essay question was, that two paraphrases from the readings had to be included, and one outside academic source on genetically modified foods was for paraphrasing. Students were told to prepare an outline for the writing day and that they would be given the entire class time to write. This was the first time in the course that planning an outline had been mentioned. For the second draft, students had to revise the first draft and add a suggestion and a recommendation to the conclusion of the draft with one sentence using a modal verb and the other sentence using the subjunctive.
The vignette below is from Day 1 of Week 8 and describes how Sophia began to introduce the new genre of writing.

**Vignette: Concede = I can see your point**

Sophia begins Day 1 of week 8 by alluding to the fact that homework had not been completed in the previous week. “This week, homework is very important. I need you to listen to the sound file, and we will do an outline of an argument essay. This is very important because an argument essay is on the final exam and you need to learn about it this week.”

Sophia writes GMF and GMO on the board and asks what the acronyms mean. Students immediately answer with genetically modified food and genetically modified organisms. She asks students for a synonym for ‘modify’ and writes ‘change, alter’ and the board. She says “I was thinking of something stronger: ‘manipulate.’ I like the word because it may show opinion.”

A discussion ensues based on the question “Why do scientists modify food.” After a few moments, Sophia announces: “We need to decide if this is good or bad.” The debate continues with comments from students such as “We need to protect plants against insects and animals,” and “We need to strengthen the seeds immune system.” These two comments are countered by “We need to improve soil, so no pesticide and no altering.” The response to this was “It would be too difficult to create the balance. The ideal is organic but it is very hard work. What’s the option? Modification!”

Sophia then asks student to look at the title of the reading on page 175 ‘GM foods are a boon to farmers but consumers ask: So what?’(Williams, 2005). To elicit prediction, Sophia asks, “Who argues according to the title? Farmers! Who is against? Consumers!” Sophia asks the student to scan page 176 in order to establish the main argument:

What argument is being made by the writer? GM foods have to offer some benefits to consumers. Why are consumers not interested? What’s the issue?
Consumers don’t benefit. GM foods are no different to conventional foods. If there is no improvement in nutrition, why would a consumer want them?

She tells that class that an argument must have two viewpoints, and the writer must know the opponent’s viewpoint. She then teaches the argument format by handing out an example essay. The topic is not related to genetically modified foods or organisms, but rather is an argument of love being more important than money. Sophia describes how the essay is written:

Notice how the essay is set up in five sections to show the argument and the form. Let’s look at the thesis statement. It must be parallel. See how it starts with ‘even though’. The second paragraph identifies the opponent. It has one reason for the opposite opinion. It is very formal and exact. The next two paragraphs are the support of your arguments and we call them proofs. The last paragraph sums up the argument with a call for action.

So we call this second paragraph the concession. What is a concession? It is important in an argument. Let me show you the verb form - concede. Remember it this way. I can see your point. It is a great way to remember this. Or as we say in slang “I get you.”

So look at that second paragraph. I want you to see the concession. Notice the second part. It is the refutation. It politely rejects what has been conceded. It is the opposite. This is when you turn into argument mode. The arguments are an elaboration of the thesis statement.

The class continues with the analysis of the argument and language used. Sophia’s parting comment to the class is to listen to the sound files and make notes. She reminds the students to look at the other side of the argument and to think “I can see your point.”

Cognitive episodes: Argument writing

Table 13 below displays the frequency of cognitive teaching episodes in Weeks 8 and 9. The total number of episodes is 39, with an increase in the percentage of ECMs to 26 from 19 in the previous two weeks of paraphrasing and summary writing. Similarly, the percentage of ESEs increased slightly to 31 from 25. Accordingly there was a decrease in the number of ERAs to 43% from 49%.
Table 13  
**Cognitive Episodes: Argument Writing (Weeks 8 and 9)**

<table>
<thead>
<tr>
<th>Episode</th>
<th>Week 8</th>
<th>Week 9</th>
<th>Total</th>
<th>Percentage of total episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERA</td>
<td>16</td>
<td>3</td>
<td>19</td>
<td>49</td>
</tr>
<tr>
<td>ESE</td>
<td>7</td>
<td>4</td>
<td>11</td>
<td>28</td>
</tr>
<tr>
<td>ECM</td>
<td>7</td>
<td>2</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total Episodes</strong></td>
<td><strong>30</strong></td>
<td><strong>9</strong></td>
<td><strong>39</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 14 shows the division of teaching activities based on the episodes that occurred.

**Table 14**  
*Argument Writing: Frequency of Teaching Activities*

<table>
<thead>
<tr>
<th>Categories</th>
<th>Focus on teaching</th>
<th>ERA</th>
<th>ESE</th>
<th>ECM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideas and Information</td>
<td>Ideas: Activating previous topic knowledge</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of reading or listening for topic information</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of thinking critically about or beyond the content in readings or listening files in order to build ideas for writing</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Language below Sentence Level (Vocabulary)</td>
<td>Vocabulary: raising awareness of spelling knowledge</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Vocabulary: building use through collocations or synonyms</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Building awareness of appropriate academic vocabulary</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Vocabulary: building awareness of inferencing words in context, using word parts (morphology), or using explanation to determine word meaning.</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Language below Sentence Level (Sentence Grammar)</td>
<td>Sentence grammar: Raising awareness of parallel structure</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of subordination and coordination</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of article and determiner use; parts of speech</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of the form and use of the passive voice</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of other grammar and punctuation</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Discourse: Language Use above the Single Clause</td>
<td>Raising awareness of essay organization</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of text organization (genre)</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of paragraphing</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of cohesion</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Regulation of Reading and Writing Task Processing</td>
<td>Raising awareness of planning the task</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of the importance of audience</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of revising/editing text for grammar and sentence errors.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of assessing ideas and structure.</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Raising awareness of summarizing/ paraphrasing</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td></td>
<td>22</td>
<td>15</td>
<td>17</td>
</tr>
</tbody>
</table>

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Once again, as in the other assignments, Sophia’s teaching activities focused on vocabulary building in preparation for the writing task. Additional focus was on engaging learners in (2.4 Inferencing word meaning in context), (4.2 Text organization) and (5.1 Planning the task). These cognitive episodes are described following the table.

**Carrying the vocabulary forward**

For every assignment, Sophia had spent a significant amount of time focusing on vocabulary development and often recycled words. The following ERA offers a rationale for her intensive vocabulary focus during the term:

The good thing about the academic vocabulary you have learned is that you can carry it forward. You can carry it forward into any kind of essay. (ERA, Week 8, Day 1, E1, 2.3).

As a pre-reading activity Sophia asked students to complete the activity on page 174 of the course text (Williams, 2005), which was a number of statements regarding the use of genetic modification in farming. The goal of the activity was for students to infer the meaning of the vocabulary from the context. Sophia extended the activity beyond inferring meaning but also offered other vocabulary strategies. Sentences that Sophia read aloud are in italics in the ERAs below:

> To reduce the number of bugs in the fields, the farmer sprayed with pesticides. The next two words are related. What is ‘pesticide?’ I need to know that ‘-cide’ is ‘to kill.’ Yes, you kill pests. Pest? Something that annoys you! (She laughs.) It is those little bugs that affect plants. Can we also use the word ‘insecticide?’ Sure we can! The weeds in the field were reduced after the farmer applied the herbicide. ‘Herbicide’ what is it? Kills bad plants or weeds. There is that suffix again -cide...yup...to kill. (ERA, Week 8, Day 1, E8, 2.4).

It is valuable for learners to know derivational affixes, and this is especially true for students in academia. Applying this knowledge in their fields of study may broaden vocabulary use (Nation, 2001). Sophia liked to draw attention to the affixes and raise awareness of the value of thinking about a word and its forms:
The scientists discovered how a gene from one plant could be moved into another plant. ‘Gene.’ What is the adjective form? Genetic. Yes –ic makes an adjective. The adverb?
(S): Genetically.
(T): Right. What is a gene? It is a combination of phenotypes and other things? What is it? It is DNA. These are all such good words for you to use. (ERA, Week 8, Day 1-7, 2.4).

The multiple meaning of words in English is also a challenge for learners as it may hinder their ability to build the lexicon. Often students learn one meaning, and then when they see the word in another context, the meaning can change. In the following ESE, Sophia pointed out the meanings of the word ‘resistant’ and how to test word inference accuracy by using a synonym:

(T): The next sentence - Some potatoes are resistant to pests. What do the words ‘resistant to’ mean? Usually resistant means against...Does this make sense? A potato is against a pest? We can’t say that. It is not logical. We need to think about meaning. How about another word?
(S): Immune?
(T): Yes, the potato is immune to pests. That works. It means that the pests don’t eat or destroy the potato. I can use a synonym to make sure of meaning (ESE, Week 8, Day 1, E9, 2.4)

In these vocabulary activities, Sophia modelled a variety of strategies to help students remember these new words. Her discourse always pointed to the importance of remembering the vocabulary so that it could enrich future writing.

**Creating a detailed argument essay outline**

In previous assignments, Sophia had not modelled creating a formal outline as a pre-writing task. Instead, students had begun a writing task often with just notes from the class or the ideas from the readings. For this assignment, Sophia’s goal was for students to create outlines in class. To demonstrate the argument structure, she modelled one based on a sound file from text. However, students would be creating outlines for essays using the readings, the sound file, and an additional source:

Now we need to go to the sound file to create an outline for the essay. An outline will help you. You can bring your outline tomorrow. In your group design an antithesis for your sound file. Look at the example and start with “Even though…” The first side is what other people believe and the other side is what
you believe. The sentence has to be parallel and it has to start with a dependent clause. (ERA, Week 8, Day 2, E3, 4.1, 5.1)

The following ECMs are excerpts of Sophia’s explicit modelling of an argument essay structure. She used an overhead and wrote an extended outline, which was more detailed than a standard point form outline (See Appendix O for the entire outline). She also clearly stated that students could not use the ideas on her outline for writing, as that would be plagiarism. Accordingly, students were supposed to use her model to create their own outlines. The following ECMs demonstrate the explicit think-aloud approach to teaching argument structure:

Now let’s create the hook for my outline (She wrote this on the overhead as she spoke). I want to bring in the topic but I want to be general but interesting enough to get attention.

**World-wide hunger has been an issue for many years; as a result, researchers have spent much time developing solutions to food shortages. Thus, GM foods are being researched by scientists to deal with these hunger issues.**

Notice how in the hook I do not start with GM foods. Instead, I give it a context, and then I introduce the background. Notice how we have kept it formal. How did we do that? What type of verb did we use? Right, passive verbs. (ECM, Week 8, Day 1-5, 4.1, 5.1)

In the argument structure that Sophia was teaching, the writer not only needed to have a clear thesis statement but also to write the response paragraph giving the concession and the refutation. It can be difficult for learners to use the appropriate formality of language in conceding the other viewpoint, and then to transition to the refutation. Accordingly, in the following ECM, Sophia very explicitly modelled how to write this difficult second paragraph of the essay:

Now, I want you to take your thesis statement and write the response. What you are doing right now is going to help you tomorrow. First, let me show you how I would do a response. This is my next paragraph. I am going to start with the idea in the first side of the thesis.

**GM foods have brought a number of benefits.**

Hmm. What are these benefits?
These foods have increased the overall yield of crops and make them more resistant to pesticides, herbicides and climate change.

Now I need to move to the refutation, and I need to show that I am going to argue with proof. I can’t just say there are dangers to GM foods without saying why. So, I’m going to write.....

However, the farmers are not paid for the high production foods that pose a danger to human and environmental health.

Notice that I have my two proofs all ready to go from that last sentence. It shows my refutation and what my proofs will be. This is very important to do this well because it will make your essay easier. (ECM, Week 8, Day 1, E7, 4.1, 4.2, 5.1)

As can be seen in the example above, Sophia’s meta-language includes ‘need’ and ‘notice’ and ‘this is very important’ all of which give students the rationale for following this model of success. Her instruction was well scaffolded. Donato (1994) would call this “a situation where a knowledgeable participant can create supportive conditions in which the novice can participate, and extend his or her current skills and knowledge to higher levels of competence” (p.40).

Sophia added a new element to the conclusion of the essay, which she called an extended conclusion. Students had to add a call for action and a recommendation along with the restated thesis. The following ESE is another example of this scaffolded instruction:

In the conclusion on my outline, look at the call for action that I have here. Notice that I am using a modal verb.

The billions of dollars spent on GM foods should be spent instead on more pressing issues such as cancer research, poverty reduction, and education improvements.

Notice too that I have my opinion here. However, because this is an academic essay, I can’t use ‘I’ here. I stuck to the passive to be objective. (ESE, Day 1, E11, 4.1, 5.1)

Sophia’s modelling in the above ESE is not as explicit as in the following ECM when she focuses on the end of the conclusion:
I have to end my essay with something powerful for the reader to remember, so I need a recommendation on this outline. Look what I am writing here. **Because of the dangers GM foods pose to human and environmental health.** Notice how here I am restating the two ideas of the refutation. I need to do that as it makes the ending of the essay stronger. Now in the second half of the sentence I am going to recommend that research and money go to helping the hunger problem in the world not with GM food, so I will write...it would be more beneficial to reduce hunger in developing countries. Here is my recommendation:

**Because of the dangers GM foods pose to human and environmental health, it would be more beneficial to reduce hunger in developing countries.**

That leaves the reader with a strong thought. (ECM, Week 8, Day 2, E12, 4.1, 4.2, 5.1)

In creating the outline above, there were 6 ECMs, 2 ESEs and 1 ERA where Sophia’s teaching discourse was specific as to how to plan each part of the essay. In this teaching segment, Sophia took her time, she explained, she answered questions, and she allowed time for students to copy down her outline. Even though Sophia used the same topic, as the class was required to use for the writing task, she felt that the readings offered significant content so that students could generate essays without plagiarising from her outline.

Since an argument essay would be the genre for the final exam, Sophia’s intent was to give an entire session for writing. The following ESE shows how Sophia, while discussing vocabulary, reiterated the need for students to consider content based on the essay prompt:

What is a downside of GM foods? They are expensive; they are altered. What is a merit? More crops. Another merit? Yes a merit is the appearance of the foods...I want you to focus on the purpose of the essay. When you are writing, you must look at the content and make sure you fit the purpose of the essay. (ESE, Week 9, Day 2, E9, 4.2)

In summary, the teaching behaviours in this week were very explicit with Sophia demonstrating ‘how’ to create an outline. She thought aloud as she wrote and gave rationale for generating an effective outline (Wilson & Bai, 2010). Much of her teacher talk focused on students’ success. Students should not only be able to use the strategies for the assigned essay but also when writing a final exam (Cumming, 1995).
Summary of Findings

Table 15 summarizes the cognitive episodes in the eight teaching weeks of the course. It should be noted that Weeks 5 and 10 were review and tests were given; therefore, no data were reported for these weeks. As can be seen in the table, 45% of episodes were ERAs, while both ESEs and ECMs were 24% and 28% respectively.

Table 15
Summary of Cognitive Episodes

<table>
<thead>
<tr>
<th>Episode</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
<th>Week 7</th>
<th>Week 8</th>
<th>Week 9</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERA</td>
<td>11</td>
<td>9</td>
<td>18</td>
<td>9</td>
<td>17</td>
<td>9</td>
<td>16</td>
<td>3</td>
<td>92</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>ESE</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>9</td>
<td>3</td>
<td>7</td>
<td>4</td>
<td>46</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>ECM</td>
<td>10</td>
<td>6</td>
<td>10</td>
<td>10</td>
<td>6</td>
<td>3</td>
<td>7</td>
<td>2</td>
<td>54</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Total episodes</td>
<td>28</td>
<td>21</td>
<td>31</td>
<td>24</td>
<td>32</td>
<td>15</td>
<td>30</td>
<td>9</td>
<td>192</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The distribution of cognitive episodes is shown in Figure 23. In Week 3, a high number of ECMs (10) occurred, which was when Sophia taught sentence structure. Week 8 also had a number of ECMs (7) when argument writing was the focus. Week 6 had a number of ESEs (9). Weeks 1 and 2 had a similar number of ERAs, ESEs and ECMs as Sophia focused on building ideas and vocabulary. It should be noted that the episodes of described teacher talk were teaching moments only and were not episodes of setting up group activities, homework or assignments. Overall, the combined ESEs and ECMs accounted for 52% of the teacher talk.
Figure 23. Variation of cognitive episodes over 8 teaching weeks.

Sophia’s focus on teaching activities described in the taxonomy in Chapter 3 changed throughout the course. She began in the first two weeks with a focus on Ideas and Information (1.3 importance of critically assessing ideas). At this time, she also focused on Discourse: Language Use above the Single Clause by engaging learners (4.1 essay organization) through an emphasis on both essay structure and thesis statements. The creation of a thesis statement included teaching Language below Sentence Level: Sentence Grammar so that students were aware of the need for (3.1 parallel structure). In Week 3, Sophia modelled (3.2 subordination and coordination), as she ‘thought aloud’ using student-generated sentences. (1.3 thinking critically about ideas in the sources) and (2.2 and 2.3 academic vocabulary and collocations) were the teaching focus of Week 4. In Weeks 6 and 7, while teaching paraphrasing and summarizing strategies, Sophia’s activities were taken from the course text, so the opportunities to explicitly model from student-generated sentences were fewer. However the focus remained on paraphrasing strategies using vocabulary (2.2 and 2.3 synonyms, collocations and academic
vocabulary) and (3.2 subordination and coordination) with an additional emphasis on (3.3 parallel structure) for thesis statements. In Week 7, Sophia’s frustration with the students’ lack of preparation was evident in the absence of cognitive episodes as she was unable to implement the group activities she had planned. However, in Week 8, there was a significant amount of modelling as Sophia taught argument structure (4.2 text organization) and emphasised the need for planning the task through extensively modelling an outline (5.1 planning ideas or structure). Episodes decreased in Week 9 as the focus was not on teaching new grammar or genre but on improvement of the first draft of the argument essay.

The data suggest that Sophia may have deliberately planned and modelled her teaching which resulted in the ESEs and ECMs. The pattern was that her teaching episodes often began with an ERA, and then teaching became more explicit with the modelling often progressing from an ESE to an ECM. Her teaching was themed and focused on content derived from the readings, and this was not a “classroom that careen[ed] madly from one clanging thematic focus to another” (Schuster, 1991, p. 39. The segments of lessons that covered grammar also integrated the teaching of essay structure, including thesis statements. Through the write-to-learn features of language (Craig, 2013) Sophia carefully planned and executed activities that built upon each other and culminated in a writing task. Each activity had a purpose that related to the final task.

Sophia’s deliberate methods of teaching concur with what Cumming (1992) found in a case study of three teachers, where their “routines” or discourse was examined in various classroom activities and found that teachers had different verbal routines. Sophia’s ERAs, ESEs and ECMs seemed to be multi-purpose in their intent in that some were planned, some responded to the students, and some were feedback. Cumming described some routines as proactive whereby the instructor deliberately planned a teaching point with the purpose of the students
using it. Proactive teaching included board work to highlight points to help students remember. Likewise, Sophia continually used the board or student-generated work as a teaching tool. Furthermore, Sophia frequently expected students to respond and contribute when she was modelling a task. Cumming called this “collectively constructing interpretations” (p. 27). These interactive exchanges built upon the modelling suggesting that the instructors’ goals were to model rhetorical or linguistic thinking similar to the thinking processes of learners. Sophia frequently used the errors in student work to teach a point such as parallel structure or sentence structure. According to Cumming, these would be responsive routines where the instructor provided corrective feedback (giving the correct answer) or prompted feedback (directing students to formulate correct responses). Furthermore, Sophia often employed questioning to clarify student meaning by facilitating the learners’ knowledge. This occurred with not only student-generated board work but also with feedback on drafts. Cumming described this as guiding individual development in a workshop environment. Interestingly, Sophia described her classroom as a workshop, particularly on writing days.

Sophia deliberately integrated collaborative work into her lessons as a socially engaging learning tool (Cumming, 1995). Accordingly, not only did her cognitive teaching scaffold the learning, but also she engaged learners and provided further scaffolding though group-work in which she paired stronger or expert writers with weaker or novice writers. The co-construction of knowledge was frequently through dialogue and Sophia’s think-alouds as she taught. According to Vygotsky (1986) dialogue is an important part of learning, which takes place at a level just beyond the current competence of the learner but within the “Zone of Proximal Development” (ZPD). Through her humour, her positive attitude, and her expertise in the subject matter, Sophia engaged the class throughout the course.
Through her modelling Sophia certainly demonstrated the strategic knowledge of reading, and to a greater extent of writing, that experts use. Kroll (1993) posits that writing teachers need to be experts in these two skills in order to actively raise awareness of the connection between the two in the writing classroom. She says “we can be effective teachers only if we learn as much as we can about how to promote mastery of our subject (p.75). Hirvela (2004) calls for teachers to be expert in teaching the readings so that they can the ‘mine’ the text in order to guide learners to specific features. Greene (1993) posits, “mining is part of an on-going effort to learn specific rhetorical and linguistic conventions” (p.36) that students can then strategically use in their own writing. Sophia’s focus on synthesising ideas for content and weaving the vocabulary from the content into all aspects of teaching was indeed expert.

Despite not focusing explicitly on many reading strategies, Sophia effectively taught the essential skills of paraphrasing and summaries, which are key elements in university assignments. Summaries demonstrate how well students have understood materials and syntheses of readings can prepare students for larger writing assignments (Hirvela, 2004). Even though the assignments the students wrote only required the synthesis of three or four texts, Sophia knew that these skills could be carried forward and she constantly reminded students that the strategies could be used for any paraphrase. She also demonstrated how ‘banking’ academic vocabulary was an investment for future work. She demonstrated the need for students to constantly assess the success of the paraphrase. Hirvela and Du (2013) posited that teaching paraphrasing is more than teaching the strategies but is also being sure students have conceptualised and evaluated the process. Bereiter and Scardamalia’s (1987) knowledge telling and knowledge transforming construct suggests that teachers can guide novice writers to transition to being experts. Sophia’s extensive practices, recycling of vocabulary and continual engagement with the reading content were steps to building awareness of expert reading-to-write.
In argument writing, when modelling the outline, Sophia fully engaged in Zhang’s (2005) *Principles and Procedure for Strategy Instruction* (what, why, how, when the strategy should be used). Planning or thinking about the organization of a task, monitoring or paying attention to the task, and evaluating success of the task requires the students’ cognitive knowledge to be activated. Instructors that explicitly teach and demonstrate tasks can facilitate the learners’ thought activation processes (Wenden, 1998). When this knowledge is triggered, learners can self-regulate learning and have the opportunity to be active in their own learning.

In summary, Sophia employed cognitive modelling and her explicit demonstrations and thinking-alouds provided students with opportunities to ‘see inside her head’ and to understand the rationale for the strategies. These data show Sophia’s focused teaching, yet it is important to analyse Sophia’s perceptions of the success of her teaching.

**Sophia’s Perceptions of Teaching and Learning**

The findings in this section discuss the midterm and the final interviews with Sophia and gauge her perceptions of the success of her teaching and her students’ learning in order to answer the second research question: In what ways does the teacher perceive teaching reading-to-write cognitive strategies as linking to students’ writing improvement?

**The success of building vocabulary**

Teaching collocations was very important for Sophia because she wanted the students to see the repeated patterns in language. She thought that mining the text (Hirvela, 2004) and using the collocations in various grammar practices “was more than just giving a vocabulary bank. Indeed, I observed the appropriate use of this approach wherein there was a transfer of language during the vaccinations topic and the GMO topic. This approach was both interesting and effective as it gave the students more tools to use when they were writing the larger piece.
Sophia’s beliefs concur with Hulstijn (2001) that with elaboration and frequent rehearsal, vocabulary knowledge is deepened and retrieval becomes increasingly automatic.

The failure of writing outlines

Sophia did not focus on producing outlines as a writing strategy other than for the argument essay. She believed that undergraduate students should already have this skill because many of the students had taken pre-university EAP classes or had been in Canadian high schools, where they had likely been taught the importance of outlining. However, since the structure of an argument essay was new to the students; she decided to model an outline. Nevertheless, Sophia later reflected that her decision to explicitly model and think aloud while writing the argument essay outline was a detriment to students’ learning.

In a credit course, if you are modelling too much, the students will actually lift from you. You need to model and then step back and let them practice. However, with that outline I did, I helped them too much. I saw some taking notes and some not, so I decided to type it up for them and give it to them to help them. Some of them just copied it and some did not take the quantum leap and take what I had taught and transfer that to a different topic. They did not see the differences so some extra steps of practice needed to be built into teaching.

Sophia could appreciate both the disadvantages and benefits of teaching outlining as a writing strategy, but in hindsight, felt that she should have provided extensive practice. Macbeth (2010) similarly found that students became dependent on a model essay and had difficulty generating their own ideas. She also found that her students perceived class discussion of the essay content to be “a prescription for writing their essay” (p. 40). Macbeth found that in student conferences she was able to point out similarities to the example essays and highlight where students needed to input their own thinking. This points to the Vygotsky’s (1978) importance of scaffolding after modelling so that the skills are transferred from the expert to the novice and are extensively practiced.
The importance of having discussions

Sophia believed that speaking in a writing class was as important as the readings and the listening files as a means to develop content. She also thought that the congeniality created by the group work lowered the affective filter in the writing classroom (Cumming, 1995). For Sophia, the value of the discussion was not only to build content but also to have opportunities for teaching vocabulary or teaching paraphrasing. When asked if the class discussions had informed the students’ writing, she felt they helped clarify readings for the weak readers so that they could re-read in order to write (Wilson & Bai, 2010).

The struggles with synthesising

Students were required to synthesise two or three readings into one essay. Sophia pointed out that similar to writing outlines, synthesising readings was a skill that student should have learned in high school. However, she knew it to be a skill that challenged students. These findings concur with Craig (2013) in that university-level students either lack the skills of paraphrasing, summarizing, and critical reading strategies, all of which are needed for synthesis. Unfortunately, Sophia felt that there was not enough time in the course to focus on strategies for effective synthesising in part due to the focus on grammar in the course. When asked if students were synthesising readings, she responded that the strong students could; however, most students simply integrated a single article. Sophia blamed herself:

I think in part I did not make a strong enough connection between the articles. I don’t know that synthesising is teachable but I needed more time to do try it. I can try to help them see the connections. It is a skill and a strategy, and organized writers have it, so surely weaker writers can learn.

Sophia regretted not teaching synthesis and even questioned the feasibility of teaching it. However, Zhang (2012) successfully implemented direct strategy training in synthesising readings into a paper in a reading-to-write class. Nonetheless, O’Malley and Chamot (1990)
caution strategy training is time-consuming and learners need extensive practice in order to proceduralize the training. Sophia was bound by the time constraints of the course and by the requirements of the curriculum.

**The success of paraphrasing**

A significant amount of time had been dedicated to teaching paraphrasing, and Sophia deemed this teaching to be very effective. She believed that the extensive practice had helped the students to become successful in their paraphrasing and summary tasks. She also attributed the success to the mining of the reading as a form of “language reinforcement”, and wished that she had had more time to dedicate to it as “It is more than just the word level, the phrase level, the clause level and the collocations. The language is all repeated, and it really helps them avoid the direct translation that they do especially when they are paraphrasing.” She believed that if students are familiar with a language bank, paraphrasing becomes easier as they are not just using synonyms but exchanging an entire phrase or clause so that the paraphrase is more contextualized. This concurs with Yamada (2003) in that paraphrasing is a complex reconstruction of a text and with Hirvela and Du (2013) that the knowledge telling processes required for paraphrasing are challenging; furthermore, when synthesising reading materials into writing, the knowledge transforming process demands a high level of expert skill.

**The power of editing**

Sophia continually reminded the students to ‘be informed by your own writing.’ In the interviews, Sophia was asked why she frequently said to the students “Why did you do this? You need to understand why?” when she was working with student sentences on the board. Her response is an indication of her beliefs that cognitive modelling guides students to awareness of common errors:
If they have to think how or why when I am saying why or how, then I am hoping that that will make them recognise that the sentence they have produced often already contains the answer. Not only the error but the solution to the error. Because the minute they look further down the sentence, there might be little conflicts along the way, but once they recognise the issue, they are okay. If you can ask yourself, why have I done that or why do I need to do that, then it is more likely that you will use what you have already done. I don’t want them to think that it has to be perfect and I don’t want them to sit there paralyzed thinking they can’t write a sentence. I want them to write it down and figure it out. They can come back and edit.

These are powerful words that support the importance of ECMs, and this is further supported by the fact that Sophia believed that students’ ability to self-edit increased dramatically during the course. The reduction in errors on assignments was indicative that students’ were likely becoming aware of editing strategies.

Gaining proficiency in grammar

Sophia indicated in her interviews that the course was in transition from being grammar-based to being a reading-to-write course. Hence, grammar was still a focal point, yet Sophia believed it should always be contextualized and be taught through the reading theme. She believed that explicitly teaching grammar strategies was integral to student success. She explained her think-aloud processes as a means to move students beyond memorizing a rule and being unable to use it. “I wanted them to think about it when they hear me think about it and ask the questions why and how.” Sophia sometimes asked students to model and think aloud, an example being the use of articles. She believed that also hearing peers’ think-alouds validated and deepened the processing of the rules. When asked if this activity had had an impact on students’ use of articles, Sophia commented that article awareness had increased as she saw edits in the writing where they had added or changed the article or the determiner. Finally, Sophia gave rationale for and validated the importance of strategies (Zhang, 2008) and believed that students benefit from hearing the teacher speak as the expert (Cumming, 1995).
Sophia saw the same success with students’ using parallel structure. Sophia’s ECMs when teaching parallel structure had been powerful moments in the classroom especially since she had mostly used student-generated sentences as a teaching tool. She found that in the contrast assignment comparative structures were complete and thesis statements were generally well constructed. The findings indicate that engagement with student-generated work as a means to teach and learn grammar may be more engaging and motivating than relying on textbook driven exercises. Sophia pointed out the ways in which the mainstream courses may have little patience with a density of ELL errors, and that the more strategically prepared the learners were the more successful they may be. Zamel (1995) also pointed to learner engagement so that teaching practices build student competences. Consistent with Sophia’s teaching approaches, Zamel said effective ESL pedagogy is having “multiple opportunities to use language and write-to-learn, course work which draws on and values what students already know, classroom exchanges and assignments that promote the acquisition of unfamiliar language…” (p.261).

The lack of teaching reading strategies

During the course, very few reading strategies were taught. When questioned why she was not teaching reading strategies, especially since most of the students were required to read extensively in their mainstream courses and would likely benefit from some strategy training, Sophia commented:

There is not a lot of time spent on skimming and scanning, on anticipating with titles, or anything like that. That’s just given very quickly, and then what’s expected of the students is they prepare— do the reading before they come to class and then we work out the tasks from there. Then we work out the collocations, the vocabulary issues. So it’s certainly not a reading class. It’s a writing class informed by reading. So it makes it a bit different in its focus. To teach writing with reading is the thing that happens to help the writing occur.”
Sophia again mentioned that the course was in transition from being grammar-based to a reading-to-write course, and she reflected on the need for reading in the course:

I know reading needs to develop in the course; it needs to go beyond simply students preparing, reading at home and then coming in and being expected to participate in certain activities or that rapport with me of back and forth and then to get to writing...the breakdown of reading is so important in the textbook, the steps are so appropriate and important.

However, Sophia felt that the course text (Williams, 2005) had many reading strategies within each chapter. The four chapters that were used in the course had a variety of strategies to be practiced at the beginning of each. For example, the chapter on branding had the following strategies listed: “applying ‘read smart’ techniques; skimming and scanning, inferencing and predicting; identifying collocations.” Each chapter practiced monitoring strategies of critical thinking. For example in the chapter on genetically modified foods, the skills were detecting bias and drawing conclusions. Sophia expressed regret that she was not able to teach and model these reading strategies and hoped that the students had gained some expertise from the text.

**Connecting reading and writing.**

This research is driven by two elements: the relationship between reading and writing and the importance of cognitive modelling. The observations revealed that Sophia demonstrated opportunistic teaching by using student-generated work to explicitly model cognitive strategies. Furthermore, it was important to investigate her views of the relationship between the two skills. Sophia frequently told students that reading informed their writing. To Sophia, being informed meant “having something to say and knowing how to say a lot of it in an expected structure.” In other words, students needed the ideas and the language to complete a task. Sophia also believed that being informed and engaged in the text entailed writing down details and thoughts while reading. She remarked this would be helpful for students in their other courses, which is in accordance with the writing-to-learn construct (Manchón, 2011). Sophia commented that
reading is not just moving the eyes over a page and writing down a word to memorize, but that by journaling students build language through reading. Sophia’s beliefs are consistent with the writing-to-read construct (Hirvela, 2004) that writing while reading leads to language skill development. Furthermore, Sophia’s viewpoint of the connection between reading and writing is similar to Eisterhold’s (1990) bi-directional modal of reading and writing. Sophia explained:

They happen together - it is the idea of symbiosis. They run in tandem. In running in parallel; they intersect at the same time. It is the idea of constant development of the skills - they are twinned together as one reflects the other.

Sophia had a strong view of the importance of the relationship between reading and writing. She was asked to reflect on what she could possibly change in her teaching methods to increase the students’ skills. Her following reflection supports both the writing-to-learn and the writing-to-read constructs.

I think that students should do some journaling, it is a form of note-taking, but it might create some distance so that students feel some ownership over the note-taking so that it not be so painful and mechanical. So by reflecting on what the students have read and personalizing it and applying it to experience, they can synthesise that material better or analyse it better and then synthesis it better later on where it is needed. I think that needs to come into effect. Then it is active reading and it is just not using a highlighter pen. It is reading – and it actually informs paraphrasing. It is a comprehension check as well. It allows them to open up the content. It allows for more avenues for language development, vocabulary, sentence variety. I think in reading you don’t just read and walk away from it. In order to maintain the twinned relationship, they should happen in tandem where you are reading and writing about your reading and not necessarily in an essay. This would really help us reduce time spent on content, content, content, and the discussion would be richer and more applicable to the writing process.

Sophia’s comment of how she views this relationship is reflected in much of the research. Spack (1997) advocated in writing-to-learn with her oft-cited study of Yuko using writing to help her to understand journal articles and then to use her notes to enhance her own ideas. Zamel (1992) agreed that reading is active and writing about it facilitates learning. Writing-to-read by choosing and evaluating sources could enhance the strategies needed for text synthesis and
paraphrasing techniques. Schneider and Fujishima’s (1995) study of the graduate student Zhang demonstrated that his struggles with reading and writing stemmed not from understanding the reading but from being able to use texts when writing. The authors suggested that writing about the readings would have helped Zhang. Sophia was aware of reading-related problems among her students and saw the need to have better integration of reading and writing strategies in her future teaching. Unfortunately she was restricted by the length of the course (10 weeks) and the curriculum focus on grammar as well as writing. Leki and Carson (1993) viewed the connection between writing into reading as increasing comprehension and paving a way into further writing tasks. Craig (2013) supported having many writing-to-learn activities as they support critical thinking skills, another reading-to-write aspect that Sophia wanted to build.

In terms of the second research question regarding how Sophia perceived her teaching, the findings suggest that Sophia was aware that she was cognitive in her choices to model when teaching and that she believed that this method was effective as she saw the results in students’ writing. Having analysed the teacher data, I next analyse the focal student stimulated recall think-alouds after writing and the students’ perceptions to determine if students actually learned and adopted the strategies, and produced writing tasks in the manner that Sophia had taught.
CHAPTER 6

WHAT STUDENTS THOUGHT

This chapter describes the student data and examines how students used cognitive strategies during the reading-to-write process. I collected data through a class survey, and stimulated recalls and interviews with the focal students. All assignments were written after Sophia had discussed readings, taught grammar points and emphasised essay structures. These data are analysed for Episodes of Cognitive Learning (ECLs). The data presented in this chapter seek to answer the third and fourth research questions:

How do students use reading-to-write cognitive strategies during their composing processes when engaged in a series of comparable writing tasks over the duration of the course?

In what ways do the students perceive reading-to-write cognitive strategies as being helpful when engaged in these tasks?

This chapter briefly re-introduces the 6 focal students. Then, the chapter is divided into descriptions of data from the post-writing stimulated recalls for three of the writing tasks: compare-contrast (two drafts), paraphrase and summary (two assignments), and argument writing (first draft). It is important to note that even though Chapter 5 described the teacher data for the process assignment on branding, data were not gathered from the focal students for this writing. Instead, this assignment was used as practice for stimulated recalls for the subsequent assignments (See Chapter 3). However, the teaching described in Chapter 5 for the process assignment had some impact on the students as the strategies Sophia taught could be applied to any writing assignment.
Each assignment section begins with a description of the assignment and has a frequency table of Episodes of Cognitive Learning (ECL) based on the student think-aloud data. (Refer to Chapter 3 for a definition of this episode type.) These data are then analysed thematically according to the *Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning* also described in Chapter 3. The chapter concludes with the results of the class survey and the focal student interviews.

**The Focal Students**

The 6 focal students, Armando, Eva, Jessica, Keith, Rehan, and Vladimir were diverse not only in age and culture but also in their university experiences, thereby bringing different academic writing and language skills to the course. These focal students were introduced in Chapter 4 with descriptions of background and their specific reading and writing challenges. All 6 focal students were enrolled in programs where academic essays or reports were required course assignments. This need to write academically may have provided the impetus for the focal students to volunteer to participate in this study. The following section describes the findings of the students’ stimulated recalls of their thinking processes while writing tasks.

**The Contrast Assignment**

As described in Chapter 5, the topic for the contrast assignment was based on readings on alternative and complementary medicine from the Williams (2005) text. In the first draft in Week 3, the students wrote a contrast essay describing the differences between western and eastern medicine. The task requirement was to compose using the block method of contrast writing with a parallel thesis statement showing two points of comparison. The first body paragraph was to describe the first type of medicine, and the second body paragraph contrasted the second type to the first. In Week 4, for the second draft, students added a third body
paragraph that compared complementary medicine to both traditional western medicine and alternative eastern medicine. The thesis statement had to be adjusted and ideas had to be linked in the new paragraph to include both eastern and western conventions to describe how complementary medicine is a blend of the two. Sophia continued with parallel structure and the use of correlative conjunctions as well as some focus on strategies for editing sentence structure errors. Sophia introduced more vocabulary with a focus on academic vocabulary and the use of synonyms such as ‘augment’ ‘enhance’ and ‘enrich.’ The course text (Williams, 2005) included a short section on complementary medicine for students to read. Sophia asked that students be prepared with ideas on the additional type of medicine.

**Episodes of Cognitive Learning: Contrast essay**

For the first draft, students read and recalled the introduction and the first body paragraph, and in the second drafts, they read only the revised introduction and the additional paragraph on complementary medicine. Table 16 below describes the stimulated recall data for both the first and second drafts. As can be seen, 52 of the 80 episodes (65%) occurred in the first draft despite Jessica missing the assignment. She wrote the assignment in Sophia’s office on another day.

<table>
<thead>
<tr>
<th>Focal student</th>
<th>Draft 1</th>
<th>Draft 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vladimir</td>
<td>7</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Rehan</td>
<td>10</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Keith</td>
<td>18</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Armando</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Jessica</td>
<td>Did not write</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Eva</td>
<td>10</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>52</strong></td>
<td><strong>28</strong></td>
<td><strong>80</strong></td>
</tr>
</tbody>
</table>
Table 17 summarises each student’s learning episodes according to the criteria from the *Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning*. Other than Vladimir, the students expressed a higher frequency of ECLs when recalling the first draft. Most students focused their learning on *Ideas and Information* for content and *Language below the Sentence Level* for sentence variety and parallel structure. There was also a focus on *Discourse: Language Use above the Single Clause* as the students considered the organization of the contrast format.

Table 17

Contrast Essay: Frequency of ECLs by Student by Category

<table>
<thead>
<tr>
<th>Focal Student</th>
<th>Multi-draft</th>
<th>Ideas and Information</th>
<th>Language below Sentence Level (vocabulary)</th>
<th>Language below Sentence Level (sentence grammar)</th>
<th>Discourse: Language Use above the Single Clause</th>
<th>Regulation of Reading and Writing Processing</th>
<th>Total ECLs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vladimir</td>
<td>Draft 1</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Draft 2</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Rehan</td>
<td>Draft 1</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Draft 2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Keith</td>
<td>Draft 1</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Draft 2</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Armando</td>
<td>Draft 1</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Draft 2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Jessica</td>
<td>Draft 1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Draft 2</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Eva</td>
<td>Draft 1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Draft 2</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>28</strong></td>
<td><strong>7</strong></td>
<td><strong>38</strong></td>
<td><strong>12</strong></td>
<td><strong>123</strong></td>
<td></td>
</tr>
</tbody>
</table>

181
To further expand upon this analysis, Table 18 looks not at the individual student, but rather at the general emergent themes for each draft. Similar to the analysis of the teacher data, the student data could have more than one learning focus in a singular learning episode. When comparing Table 17 with Table 18, the data show that within the category of *Ideas and Information*, (1.1 activating previous knowledge) and (1.2 Raising awareness of reading or listening for topic information) students tended to focus on activating their prior knowledge of the topic for the first draft, while less information gathering was needed for the second draft.

*Language below Sentence Level: Vocabulary*, specifically (2.2 Collocations, synonyms) and (2.3 Academic word use), remained an area of learning in both drafts, as did (4.1 Essay organization) and (4.2 Text/genre organization).

Table 18
*Contrast Essay: Frequency of ECLs by Strategy*

<table>
<thead>
<tr>
<th>Categories</th>
<th>Focus on learning</th>
<th>Draft 1</th>
<th>Draft 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ideas and Information</strong></td>
<td>1.1 Ideas: Refers to activation of previous topic knowledge</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>1.2 Ideas: Refers to awareness of reading or listening for topic information</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>1.3 Ideas: Refers to awareness of thinking critically about or beyond the content in readings or listening files in order to build ideas for writing</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Language below sentence level (Vocabulary)</strong></td>
<td>2.1. Vocabulary: Refers to awareness of spelling knowledge</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2.2. Vocabulary: Refers to use through collocations or synonyms</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>2.3 Vocabulary: Refers to awareness of appropriate academic vocabulary</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2.4. Vocabulary: Refers to awareness of inferencing words in context, using word parts (morphology), or using explanation to determine word meaning</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Language below sentence level (Sentence grammar)</strong></td>
<td>3.1 Sentence grammar: Refers to awareness of parallel structure</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3.2 Sentence grammar: Refers to awareness of subordination and coordination</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3.3 Sentence grammar: Refers to awareness of article and determiner use; parts of speech</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3.4 Sentence grammar: Refers to awareness of the form and use of the passive voice</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3.5 Sentence grammar: Refers to awareness of other grammar and punctuation</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Categories</td>
<td>Focus on learning</td>
<td>Draft 1</td>
<td>Draft 2</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Discourse: Language use above the single clause</td>
<td>4.1. Refers to awareness of essay organization</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>4.2. Refers to awareness of text organization (genre)</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>4.3. Refers to awareness of paragraphing</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4.4. Refers to awareness of cohesion</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Regulation of reading and writing task processing</td>
<td>5.1. Refers to awareness of planning the task</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5.2. Refers to awareness of the importance of audience</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5.3. Refers to awareness of revising/editing text for grammar and sentence errors.</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5.5. Refers to awareness of assessing ideas and structure.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5.5. Refers to awareness of summarizing/ paraphrasing</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Totals:</td>
<td></td>
<td>79</td>
<td>44</td>
</tr>
</tbody>
</table>

These specific themes are discussed in the following sections and exemplified with relevant examples from the students’ essays (in italics) followed by the student stimulated think-aloud reflections. Each theme has some discussion linking it to relevant literature.

**Seeking ideas on the topic**

Sophia constantly reminded the students that it was important to read in order to be informed when writing, and that ideas would come from the course text and the sound files. She also had many classroom activities such as group discussion or completing outlines of readings in order to enhance general knowledge in conjunction with reading content. This section discusses the findings for each focal student.

Vladimir was very cognisant of the need to be well-prepared from his readings in order to write. Before reading the first sentence of his essay, he commented,

*Today I tried to write on the topic. This topic is new for me, because I am from Russia and there is a lot of traditional medicine in Russia. Anyway to be well prepared for the essay, I discover a lot of texts on the pros and cons of eastern and western medicine (1.1).*
Then in reading the first sentence, “Conventional medicine has been the most common choice of treatment for our society for year,” he added:

Yup. This sentence not is from my head or whatever. It is, I mean, this thoughts I got when I read a lot of material according to this topic. So, it’s like, uh introduction. I know that this introduction will be in my essay because yesterday when I prepared for the essay and was reading, right, I already I was trying to figure out the introduction and what will be the main parts and so on (1.1, 1.2, 4.1).

In the second draft, ideas for the new theme of complementary medicine continued to be a challenge for Vladimir despite his using the available sound files and having completed extra readings.

*However, Homeopathy, a branch of alternative medicine, conventional and complementary medicine have vital differences in philosophy and methods of healing.*

...I had a little problem with the new thesis statement and integrate the discussion about the complementary medicine. I needed to read lots more. The main differences like philosophy and methods remain the same. I like to discuss this topics. This word ‘vital differences’ it comes from the audio file that I had. I like this phrase ‘vital differences.’ (1.2, 2.3, 4.1).

Unlike Vladimir, Rehan had rich personal background knowledge for some of his content, “Like many other forms of alternative medicine, chiropractic medicine also differs in philosophy and practice from the mainstream western medicine.”

...Well I did some reading before I came to class, so I did fully understand about the philosophy. I read about how that is different in both the traditions. I was aware since my parents are doctors. I was aware with the practice aspect of the differences because, er, when I was growing up a lot of MDs would use some homeopathic techniques in their normal day-to-day clinical – er - you know - whereabouts...So I was aware of those so I didn’t do much reading on the practice part. (1.1, 1.2, 4.1)

However, Rehan had taken ideas directly from sources without referencing. He read, *Symptoms are permitted to slowly express themselves so the body may cleanse and return to its homeostatic balance via its innate healing ability.* “Hmm? Ah yeah. The idea for that sentence was half copied and half made up. Wasn’t exactly copied” (1.2, 5.5). In her feedback, Sophia
had indicated that this sentence and others in his body paragraphs were plagiarized. Consequently, she had deducted marks with the warning that he would receive zero if he plagiarized again. As she had not yet taught paraphrasing skills and was uncertain if the plagiarism had been intentional, she made the decision not to give Rehan a zero on this assignment.

In the second draft, Rehan had noted in the margins that some text was paraphrased, but mostly, he continued to draw upon his personal experiences for content especially when he wrote the paragraph on complementary medicine.

*For example a person who has developed complete lactose intolerance will never be able to consume dairy products. Pills containing lactose enzyme partly help in digestion of lactose. But a new complementary technique is being used in India. Doctors there are prescribing lactose intolerant patients to eat uncooked egg albumen protein. Clinically speaking, this protein naturally heals the section of the small intestine.*

When prompted to reflect on this new content, he replied, “I had this problem as a child, and I was the patient. This is also from my own experience. The doctor told me about it…the homeopathic tradition - in India” (1.1).

While Rehan was familiar with both western and homeopathic medicine, Keith was uncertain if he had enough knowledge of western medicine to write the essay. His uncertainty was evident as he read the first sentence of his first body paragraph. “Western medicine’s methods of healings are base on surgery and drugs,” as he commented, “I don’t know this before. These ideas are come from books. I think they are okay” (1.2). Keith then continued reading his text and stopped mid-sentence, “Western medicine is very use for urban people. It saves them time by increasing recovery rate…”

This is something I thought about because usually western medicine is kind of like Tylenol or something like that. They do wonders for the first few days and then the effects wear off (1.1).
Continuing to read the previous sentence, “It saves them time by increasing recovery rate, but the cause of the sickness will be left behind. It cures in the interim,” he added, “I guess we don’t know the cause in western medicine. I thought about that the day before we wrote, but I didn’t read it” (1.1).

Throughout his writing, Keith continued to be find it challenging to generate ideas for content. Reading from the beginning of his second body paragraph, “Eastern medicine is more of a supplement. It focuses on the cause and it heals the body over time.” he remarked, “It took a while to think about it. After the first paragraph, I was stuck. My brain was just plain stuck. I had to think about it for a while. I had to leave the room to refresh and get ideas (1.1). Keith had left the classroom for approximately 10 minutes during the assignment, and prior to that, he had spent time with his pen down tapping the desk with his hand. Even when writing the second draft, Keith felt concerned about implementing new content by drawing upon the readings because Sophia had commented on his first draft that he needed to add specific examples to his writing.

Eva had completed the readings and had some confidence in her essay content, yet she was concerned about the clarity of ideas for the reader. “First, observing the tremors in the hand and the exam the internal wind by acupuncture channels are the usual method used by eastern doctors in diagnosis.” Eva commented, “I just wrote...It is from the reading, and I did some extra reading. A little bit of information I know. I don’t know if this sentence make clearly to the reader – the wind” (1.2. 5.1). When Eva continued reading the second body paragraph, her uncertainty grew, “Acupuncture working without drugs or chemical medical has not any side effects; therefore,

Maybe I should compare this with the western but, but I don’t know. I don’t know much about the side effect- about the western medicine. Everything is so
complex. Maybe I should emphasize the eastern part. So I could not write about the bad effect or the chemicals (1.1, 4.2).

As Eva read her second draft, the importance of activating and building background knowledge became evident as her writing had been informed by the class discussion of alternate forms of medicine. Eva read, “For example, after having surgery, patients with heart disease may be advised to do meditation or yoga to help people calm.” She commented, “I used the meditation and yoga for complementary. I just know a little about this from the listening, and I do some yoga. We talked in class too about yoga” (1.1).

Even though Armando found the structure of an essay difficult to compose, he was knowledgeable on the topic and referred to this when recalling both drafts. “I read a lot about this. I read this homeopathy since 1970” (1.1). He was well informed about the philosophy behind homeopathic medicine. When reading part of his first body paragraph, “The homeopathic philosophy state clearly that a human being is an indivisive unity, therefore much be treated as a whole,” he said, “What I always thought, this is a real philosophy of homeopathy. This is what was my mind as a complete idea” (1.1).

Armando had very little to say about his first draft as he had only written 185 words. He had written at the end of the assignment: “Incomplete. 185 words. My feeling > complete frustration. Anyway, I will not give up. I need a break now! Thank you.” Upon reading this, he commented:

Complete frustration because I couldn’t really write down what Sophia wanted. Make clear statement and thesis. I feel frustrated because I can’t do it. That is why I had to leave. It is very hard to me. If I wasn’t writing but was talking in front of people, maybe it would be easier for me as I know about the topic” (1.1, 4.1).

However, Armando wrote considerably more in the second draft, 409 words, as he had come to the class prepared with notes on his personal knowledge of the topic and some ideas
from the text. He still felt that the hour and a half time constraint was not enough to write a complete essay.

Jessica had written her first draft in Sophia’s office as she had missed the class due to illness. In her stimulated recall of the second draft, she read, “Unlike mainstream medicine, complementary medicine is not a cure. Instead, complementary medicine is used as an adjunct to Western medicine.” “I used the notes from the class and the sound file thing. I read from the notes first so I think this is the right saying – adjunct” (1.2, 2.2). Jessica’s focus on the word ‘adjunct’ is interesting to note as Sophia had explicitly taught this vocabulary. Jessica wrote a 500 word essay that integrated the concepts of complementary medicine from the readings and class discussions.

In summary, the data revealed that generally students found it challenging to develop content in both drafts. Preparation through reading, sound files and discussion informed content. In the first draft, Vladimir and Eva had consciously built content based on the readings. Green (1993) called this mining the texts. The learners had not only read the text with guidance from Sophia, but they had also actively explored other texts that related to the topic in hopes of building knowledge and ideas. Unfortunately, Rehan had used the ideas from readings without reference, perhaps unintentionally. Accordingly, Sophia chose to deduct a mark rather than award a zero for the assignment, as she would be teaching paraphrasing within a couple of weeks. Li and Casanave (2012) posited that unintentional plagiarism should not be punished but should become a pedagogical focus and specific paraphrasing strategies should be taught. Furthermore, Hirvela (2004) said that topic knowledge can be gained through reading for interest or through world experience, and Rehan and Armando exemplify this in their comments. Armando’s negativity and frustration with only having written a small amount is similar to observations by Bailey (1983), whereby learners adopt an affective attitude that is negative; thus,
this intensifies the learners’ feeling of incompetence. Similarly, Hillison (1996), in a study of second language learners and language learning anxiety, pointed out that despite initial motivation in the class, learners become exasperated when they feel they do not have the skills to complete a task. Keith’s demonstration of frustration was coupled with ‘getting stuck’ or writer’s block. Unlike Armando, Keith was still able to produce a relatively effective piece of writing. This is similar to the results of Lee’s (2005) study of Taiwanese university students and the interrelationship between being frustrated or apprehensive when writing and having writer’s block. Lee described writer’s block as being part of the composing process and suggested that some extensive reading can alleviate this. Overall, the focal students were aware of the need to read in order to generate content for their essays despite their varied writing challenges.

In the second draft, the topic of complementary medicine was new to most of the focal students. Even though Armando and Rehan had some background knowledge on the topic either through personal interest or experience, they still had to mine the texts in order to incorporate ideas into the essay (Hirvela, 2004). Similar to Lee’s (2005) students, Keith, despite his continued frustration with having a lack of ideas, was able to bring the concepts from the readings into his writing. Both Jessica and Eva drew upon the audio, reading texts and class discussions for content. Casanave (2004) pointed to the importance of social interaction in writing, whereby the teacher plays a role in pre-planning discussion, so that the writer is not solitary in the process. Casanave also described the interaction between writer and reader, and that the audience needs to be clear to the writer. While Eva may not have been clear about who the audience was, other than Sophia, she did express concern about the clarity of her ideas to the reader. While writing this second draft, the students’ ECLs still focused on the need to develop content knowledge from the readings.
Writing a thesis statement and integrating academic vocabulary

This contrast assignment required students to write using academic voice and vocabulary. The student stimulated recalls revealed an awareness of accurate use of vocabulary and, equally, of the importance of the thesis statement guiding readers to the main points. The vocabulary for types of medicine was new for many of the students; consequently, Sophia had spent a significant amount of time teaching the collocations and having students practice writing thesis statements with parallel structure in preparation for the writing task. Chapter 5 described how she modelled thesis statements for the first draft of this essay. She even left one written on the board as a guideline “A great number of people are turning to alternative medicine because it provides simpler and safer methods of (1) preventing illness and (2) alleviating symptoms than mainstream medicine does.” Sophia had told the students that the thesis needed to show two kinds of medicine, a comparative structure and two thesis points.

In the stimulated recalls, data analysis revealed the same two themes in the two drafts: Discourse: Language Use above the Single Clause (4.1 thesis statement) and Language below Sentence Level: Vocabulary with a focus on (2.1 collocations) and (2.2 academic word use). However, the ECLs indicate that the parallel structure of thesis statements had not proven easy for most of the focal students to write in both drafts, while vocabulary integration had been effective.

In his introduction to draft one, Vladimir had written: Homeopathy, the branch of alternative medicine, provides different approach to treatment and in general cases gives better results. In recalling the writing process of the thesis statement, he indicated:

This - it was confused me because I need to write it correctly and lead, and to write according to it. Because I do not have exactly in the beginning the whole picture of my essay. We start from the small box, the statement, for example I like to discuss the philosophy or approach and then I like to discuss the methods or results. But anyway in this case, it was hard...That is my first statement...(4.1, 5.1)
Vladimir’s thesis lacked the comparison of the two types of medicine, but in his recall, he was unaware of not having achieved that task requirement.

However, in the second draft, Vladimir felt more confident about his introduction and the integration of vocabulary. In this example, he read his entire introduction and then reflected:

*Conventional medicine has been the most preferable choice of treatment for our society for years. However, today, the popularity of alternative medicine has significantly increased. It is commonly known, that the goal of any medicine is to heal a disease. However, Homeopathy, a branch of alternative medicine, conventional and complementary medicine have vital differences in philosophy and methods of healing.*

I did several improvements, and I removed the word common and chose the word ‘preferable.’ This is my new vocabulary, and I can recall the new word preferable. I used a few phrases like ‘it is commonly known.’...I had a little problem with the new thesis statement and integrate the discussion about the complementary medicine. The main differences like philosophy and methods remain the same. I like to discuss this topics. This word ‘vital differences’ it comes from the audio file that I had. I like this phrase ‘vital differences.’ (1.2, 2.3, 4.1, 5.3)

Not only did the assignment require academic word use, but it also required specific vocabulary that may not normally be part of a student’s lexicon. Vladimir exemplified this as he read: “*The traditional western medical system divides the body into parts, each of which has its own specialist, Allopathic practitioner usually looks only at the parts of the body that belongs to their specialty,*” and remarked:

What about these two sentences... there is very sharp words. It is common words...the traditional western systems – Allopathic - I don’t feel this word. Allopathic it is close to this vocabulary. It is not into mainstream. In common life I would not use this word because I wouldn’t be sure what does it mean, exactly. I use allopathic. But I use it okay here (2.2, 2.3).

‘Allopathic’ had been a word that Sophia had taught and used in a number of example sentences when she had been teaching the vocabulary for the unit.

In his first draft, Rehan understood how to construct the two thesis points, and he read:

“*Like many other forms of alternative medicine, chiropractic medicine also differs in philosophy*
and practice from the mainstream western medicine.” Rehan commented, “Yup. That is what I was thinking. I will come up with the thesis and then just talk about philosophy in two paragraphs and talk about practice in two paragraphs. One paragraph for one tradition” (4.1, 4.2). This ECL indicates that he was considering the effect of the thesis on the organization pattern of the contrast essay.

In this draft, Rehan seemed very confident and at ease with the specific vocabulary and was able to describe why he had this confidence. After reading his body paragraph, he explained:

They [Chiropractors] believe that a symptom is merely a body’s response to environmental stress, a sign that the body is fighting to return to its homeostatic balance ’...Western medicine, however, holds onto the belief that the symptom itself is injurious to health and must be treated. It sees the organ systems as interconnected as a whole, and thus any single symptom caused by problems in one organ system can be lethal to the whole body. Hence, the cause of the symptom is given very little priority over the symptom itself. Therefore the root cause of the problem is not treated.

Rehan: I know all this from my physiology class since I am in biomed.

Researcher: What about the vocabulary?

Rehan: The ‘homeostatic balance’ is from my biology class. ‘Organ systems interconnected’ is from my classes too. ‘Lethal’ is a term used in sciences. I knew other language from the whole experience of taking this course like ‘treat a problem.’ (1.1, 2.2, 2.3)

Unfortunately, Rehan had not attended two teaching classes during the week that the second draft was written; therefore, he had missed the in-class preparation for the new thesis statement, which was to include complementary medicine as the third point of comparison. As a result, his thesis had little change from the first to the second draft. He read the thesis and commented:

Although these two schools of thoughts profoundly differ, their goal is the same and therefore can be combined into one school to help people recover from their illnesses.
I did not make much change. Their goal is the same, and then it can be combined into one goal … in the thesis. I changed that. (4.1)

It is unclear if ‘one school’ refers to complementary medicine; therefore, Rehan’s thesis was not the ‘road map’ that Sophia had intended that students create.

When writing the introduction for the first draft, Keith was concerned about the sentence structure he had used before the thesis statement, “Both Western and Eastern medicine have different characteristics such as philosophy and practice for health care. Western medicine treats the symptoms of the sickness; however, it will not find out the cause of the sickness.”

Keith: These two sentences kind of introduce the thesis I am planning to do. Kind of used one of the methods of sentence structure that Sophia taught us. It is one of them. I can’t remember the name of it. It is the adverb thing or something like that.

Researcher: When you wrote that, did you just know or did you look it up?

Keith: I looked at the samples. (3.2, 4.1)

Keith continued to think about sentence structure as he continued to read, “In contrast, Eastern medicine looks after the cause of the sickness; still, the result is not the same,” and commented, “It is basically the same adverb thing. I wanted the parallelism in the sentence” (3.1, 3.2). The sentences that Keith had written were modelled after the examples with conjunctive adverbs provided by Sophia when she taught sentence variety. However, as Keith read what he identified as his thesis, he no longer considered the structure of the language but employed a visual concept that informed how he wrote, “One thing in common is that both of these forms are a healing hand to patients” and added, “Usually stuff come more visually before doing words or a form. So I was thinking about doctors lending their healing hands to their patients. That is how I figured the thesis sentence out” (4.1).
In the second draft, Keith did not clearly incorporate the concept of complementary medicine into his thesis; instead, he focused on the feedback from Sophia to improve organization of the introduction:

*Healing is the process of becoming healthy. Western medicine treats the symptoms of the sickness; however, it will not find out the cause of the sickness. In contrast, Eastern medicine looks after the cause of the sickness; still, the result is not instant. Both medicine have different characteristics such as philosophy and practice for health care. One of the important factors for Western medicine is crisis care.*

I kind switched the sentence “Both medicines have different characteristic such as philosophy and practice for health care” because Sophia said it is not kind of suitable as a thesis at the beginning of the paragraph, so I put it at the end. She wanted me to have a transition sentence for the second paragraph so I added this, so it is kind of like a small introduction to the next paragraph. (4.1, 4.3).

It is unclear if this final sentence is Keith’s attempt at the introduction of complementary medicine into the essay.

Keith’s hesitation to use academic vocabulary contrasted with Rehan’s confidence and sophisticated use of vocabulary. Keith read the first body paragraph of the first draft, “*It is ideal for minor or not serious sickness. Eastern medicine promotes health maintenance and preventative care. It is good for people that have time and want the body to rejuvenate itself.*” and gave rationale for his lexical choices, “Yeah. Usually I use words I know or ones from the class. I don’t plan on using complicated words because I don’t want to mix myself up at all” (2.3). The words ‘preventative care’ ‘health maintenance’ and ‘rejuvenate’ had been explicitly taught in the class.

In the second draft, Keith had an increased confidence with the vocabulary, perhaps due to the intensive in-class practice during that week. He implemented much of this practiced vocabulary into his writing. The words ‘fusion’ and ‘adjunct’ had been written in many example sentences on the board. Keith read his new paragraph on complementary medicine and recalled,
The fusion method of western and eastern medicine is complementary therapy. Complementary therapy is not a cure.

It is kind of like a mix of ideas of therapy. It is not really a researched method of medicine. I like the word ‘fusion.’ (2.2)

*It enhances a person well-being, promote quality of life and should be use as adjuncts to Western medicine.*

It is kind of based on the words Sophia wrote on the board, and it also has ideas from the reading like ‘well-being’ and ‘promote quality of life,’ but I paraphrased it from the reading. (1.2, 2.2)

Conversely, Armando still continued to struggle with writing a thesis and structuring an essay. As he read his first draft thesis, “Homeopathic medicine has proven to be the most effective way to treat a patient, because goes to the root of the disease. Treat an ill person as a whole, as a complete entity,” he speculated:

Armando: The big problem to me is how to make a thesis and how to make a grabber.

Researcher: What does this sentence say to you?

Armando: It does not say much. I was trying to get a strong statement but I did not get it very clear. Treat an ill person as a whole. In reality I don’t know if it fits into the thesis. …I am very confused about that. I know I am going to write about homeopathic medicine. But to make reader interested, I have to grab the attention, but I do not know how to do this. Finally, I decided just to write anything that comes to mind.

Rather than writing paragraphs cohesively, Armando had a series of sentences on the page that were separated by spaces. He did not have the contrast block essay structure. When asked if they are sentences or paragraphs, he replied, “They are two sentences with opposite meanings” (4.3). Further on when reading, “Homeopathy is creative because focuses on the emotional, physical and mental aspect of the individual. The homeopathy, the healing process, goes from inside out rather than outside in,” he remarked, “I was jumping from one thing to another to just complete the idea. But it is not completely together.” (4.3). A few sentences
later, Armando read another isolated sentence, “The real challenge for the homeopathic practitioner is to listen carefully what to patient say related to their feelings.”

Researcher: Are you starting this as a new idea? A new point?
Armando: Exactly yeah. This is another point to the paragraph. (4.3).

In the second draft, even with Sophia’s feedback, Armando continued to struggle with organization and, in particular, with the thesis statement even though he was able to integrate the idea of complementary medicine into his writing. He read, “The homeopathic approach aims to treat the person as a whole, while the mainstream medicine treat the patient’s symptoms. In the last few years the complementary medicine has been playing an important role in helping the mainstream medicine to cope with an ill patient,” and stated:

Armando: This last sentence come from the complementary medicine can conjoin with western medicine.
Researcher: Why do you have this written in the margin?
Armando: What? Thesis not clear? Well I don’t think it is clear. Is not very clear state. Or maybe it is. I don’t know about that. (4.1)

Even though this was Armando’s fourth assignment in the course, he still was unable to create the required structures in spite of the explicit modelling from Sophia.

Despite his struggles with structure, Armando, perhaps because he could draw upon the cognates of Spanish and English, had a good range of vocabulary and was aware of collocations. Reading from in his first draft, “Homeopathy is creative because focuses on the emotional, physical and mental aspect of the individual. The homeopathy, the healing process, goes from inside out rather than outside in,” he commented, “I don’t think the vocabulary is bad. Is not slang. I did not use a dictionary” (2.3). Armando seemed to carefully consider his word choices, as he read, “According to the philosophy the real cure could happen when the syndrome of the patient match exactly with the drug is going to prescribe,” he noted, “This vocabulary,
syndrome, I like it. Because syndrome is many things together. It sounds better than saying many symptoms” (2.3).

While Armando struggled to understand the structure of both a thesis statement and paragraph structure, Eva had carefully considered what she would write in the thesis and describe in the ensuing paragraphs. She indicated she needed a specific focus when comparing the two aspects of eastern and western medicine:

Firstly I think if I can compare acupuncture with the western medicine as I think the western medicine have the equal comparison with the eastern. Yesterday I asked Sophia and she told me to use a particular method, yes, a particular method, so I choose acupuncture. (4.1)

Eva read the thesis, “At the same time, the differences between the two medicine systems have emerged. In terms of the acupuncture, which is an important part of eastern traditional medicine, it differs from western medicine in the philosophy and practice,” and expressed her concern about the reader understanding her meaning due to her grammar errors:

In fact I took this thesis sentence to Sophia. My problem is mistakes in spelling and grammar. Sometimes it is hard to find suitable words. I am trying to vary the…the structures. Um…I am not sure if this word “it” will confuse the readers. But if I repeat the acupuncture, I feel this repetitive. I am not sure about this. (3.5, 4.1, 5.2).

In the second draft, Eva was aware of the need to add the new idea into the introduction. However, she was not explicit in naming the integrated form of medicine even though Sophia had spent approximately 15 minutes discussing complementary medicine before students began the assignment:

For a long time, Eastern medicine confused and could not be accepted by the western practitioners. However, as the concept of 'preventative' health care' has been increasingly prevalent in the Western countries, Eastern medicine is viewed as a 'new' way for western patients to maintain health and cure some diseases. At the same time, the differences between the two medicine systems have emerged at two aspects: philosophy and practice. Moreover, a combined medicine has been created when Eastern medicine appeared in the western world.

I think the main idea changed a bit, I added a new sentence, a thesis.
Eva’s introduction has good examples of vocabulary such as ‘maintain health,’ ‘preventative health care’ ‘health maintenance’ and ‘rejuvenate,’ which had been explicitly taught in the class. However, she had some uncertainty around some of her other word use. The following ECL is from the body paragraph in her first draft:

_Eastern medicine once could not be accepted by the western doctors or patients for a long time. However, as the concept of “preventative health care” has been increasingly prevalent in the western countries, eastern medicine started to be view as a ‘new’ way for people to maintain health and cure some diseases._

Eva: Maybe some words, I am not sure if I can use ‘prevalent.’ I don’t know if the word ‘way’ is too general, but I not sure how to change this words. And ‘cure some disease,’ this is not good.

Researcher: Why? What is not good?

Eva: Maybe the vocabulary. Disease is maybe too serious here. It is focused on things that are too illness. (2.3)

Eva knew that being able to use a variety of synonyms would improve her writing, yet she had difficulty with the breadth of her vocabulary. She read, “_Furthermore, acupuncture is considered a effective treatment to cope with chronic diseases such as arthritis,_” and reflected:

As I used the ‘considered’ before, but I don’t know the other words, so I used it again. I don’t think the word ‘cope’ is accurate at all, but I don’t know the other words. I don’t know a synonym. So I think this okay (2.2).

Jessica’s stimulated recall is related to her second draft as she was not present the day students wrote their first draft. She considered word choice as well as thesis structure:

_Then, what would be done for a human body? There are three solutions: Western medicine, alternative medicine and complementary medicine. Although these three types of medicine share the same principle of helping people, Western medicine, alternative medicine and complementary medicine do take different approaches in the aspects of philosophy and methodology._

This last sentence is the thesis. I worked more on the word choice because I don’t just want to say ‘it is different,’ so I used the word ‘approach.’ (4.1, 2.2).
Reading her new paragraph, “While Western medicine differs from Eastern medicine, complementary medicine becomes an integrative approach of that two types of medicine,” Jessica commented. “I had some difficulties with word combinations, but I like integrative approach” (2.2). The words ‘integrative approach’ had been used in class discussion. Subsequently, Jessica met the task requirements and had integrated complementary medicine into the background information of the introduction and into her thesis statement while using effective academic vocabulary.

In summary, as the ECLs have shown, in both drafts, the students had an awareness of the need to write a clear thesis statement despite their perceived difficulties. Vocabulary was generally a challenge, use of synonyms being the most challenging. Variation in vocabulary proficiency was likely dependent on the learners’ depth and breadth of vocabulary (Laufer, 1997). However, this assignment required some vocabulary specific to the discussion of medicine. Much of the vocabulary that students recalled was academic, and Nation (2001) and Coxhead (1998) emphasize the need to learn academic vocabulary for use in the EAP context. Hulstijn (2001) called for explicit teaching and deep elaborate processing of new vocabulary with frequent rehearsals and practice to maximize the learners’ retention. Sophia’s continual use of vocabulary in all classroom activities resulted in use of the practiced words as was illustrated by Eva’s and Keith’s ECLs. By having students collaborate and write sentences, Sophia had also engaged in a social learning context for the lexical items, which Schmitt’s (1997) study found was a precursor to language use as well as motivating for students.

The process of preparing a second draft required the students to revisit and revise their thesis statements, which proved challenging. Rehan and Keith attempted to revise their thesis statements; however, it is unclear if they were referring to ‘complementary’ medicine. Rehan had not attended classes that week and Keith periodically appeared unfocused that week. Vladimir,
Eva and Armando attempted to incorporate the new point in to the writing with limited success; however, Jessica was the most successful at creating a clear thesis that modelled Sophia’s teaching. Most of the focal students referred to vocabulary as something that they revised or added in the second draft. This concurs with Porte’s (1997) study in which it was found that vocabulary was usually the main concern for students in the revising process of multi-drafting. In their ECLs, Jessica, Eva, and Keith referred to vocabulary that Sophia had explicitly taught. As Laufer (1994) reported, it is the explicit teaching and practice of vocabulary that increases student’s lexical knowledge so that they can write in an academic context. Finally, Nation (2001) found that explicit teaching is critical to learners having productive knowledge of vocabulary. Sophia had dedicated much of that week to vocabulary development.

The Paraphrase and Summary Assignments

These two assignments took place in Weeks 6 and 7, as Week 5 had been a review week for the midterm exam. The first assignment was to paraphrase pages 125-126 (lines 42-58) of the course text (Williams, 2005). For the second assignment, using the same article, the students were required to summarize lines 42-85 (seven paragraphs). The topic was vaccine safety, which Sophia took the opportunity to revisit vocabulary from the previous topic of comparing types of medicine. The two weeks of teaching were rich with examples and practice activities focusing on how to paraphrase using specific strategies.

Episodes of Cognitive Learning: Paraphrase and summary

Table 19 below describes the stimulated recall data for both the paraphrasing and the summary writing assignments. The table shows that 48 of the 83 episodes (59%) occurred in the paraphrasing assignment, while there were fewer episodes as the students recalled the summary writing task.
Table 19
Paraphrase and Summary: Frequency of ECLs

<table>
<thead>
<tr>
<th>Focal student</th>
<th>Paraphrase</th>
<th>Summary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vladimir</td>
<td>8</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Rehan</td>
<td>11</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Keith</td>
<td>6</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Armando</td>
<td>4</td>
<td>Away for task</td>
<td>4</td>
</tr>
<tr>
<td>Jessica</td>
<td>8</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Eva</td>
<td>11</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>35</td>
<td>83</td>
</tr>
</tbody>
</table>

In order to have an overview of the ECLs of each student, Table 20 summarises their episodes according to the criteria from the *Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning*. All students demonstrated more ECLs while writing the paraphrase than during the summary exercise. All students focused their learning on *Language below the Sentence Level* - vocabulary and grammar (34 and 28 ECLs respectively), which are two of the main strategies or techniques for effective paraphrasing. It should be noted that since these assignments required paraphrasing and summarizing strategies, students demonstrated a high number of episodes (71) in the category of *Regulation of Reading and Writing Task Processing*. In other words, in most of the stimulated recall data students referred to paraphrasing or summarizing when recalling the other strategies they had used.
Table 20
Paraphrase and Summary: Frequency of ECLs by Student by Category

<table>
<thead>
<tr>
<th>Focal Student</th>
<th>Multi-draft</th>
<th>Ideas and Information</th>
<th>Language below Sentence Level (vocabulary)</th>
<th>Language below Sentence Level (sentence grammar)</th>
<th>Discourse: Language use above the Single Clause</th>
<th>Regulation of Reading and Writing Processing</th>
<th>Total ECLs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vladimir</td>
<td>Paraphrase</td>
<td>0</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Rehan</td>
<td>Paraphrase</td>
<td>0</td>
<td>8</td>
<td>7</td>
<td>0</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Keith</td>
<td>Paraphrase</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Armando</td>
<td>Paraphrase</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Jessica</td>
<td>Paraphrase</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Eva</td>
<td>Paraphrase</td>
<td>0</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1</td>
<td>34</td>
<td>28</td>
<td>9</td>
<td>72</td>
<td>144</td>
</tr>
</tbody>
</table>

The specific cognitive strategies employed by the students are shown in Table 21. The data demonstrate that the greatest focus was Vocabulary (2.2 refers to use through collocations or synonyms) with 24 episodes for the paraphrasing assignment and only 3 episodes for the summary assignment. Since the two assignments used the same text to produce both the paraphrase and the summary, the students had already used synonyms in their paraphrases, and thereby were not required to use new synonyms for the summaries.

The other main category of learning was Sentence Grammar: (3.2 Raising awareness of subordination and coordination) with 19 episodes. Being able to change sentence structures is a significant strategy for effective paraphrasing. However, in the summary assignment, students commented less frequently on sentence structure as the changes had already been made in the first task. Other data of interest are the students’ reference to their awareness of paraphrasing and summarizing. There are more references (38) in the paraphrasing task, with 26 episodes in
The summarizing task. The student data subsequent to the chart show examples of vocabulary and sentence structure as they relate to paraphrasing.

Table 21
Paraphrase and Summary: Frequency of ECLs by Strategy

<table>
<thead>
<tr>
<th>Categories</th>
<th>Focus on learning</th>
<th>Paraphrase</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ideas and Information</strong></td>
<td>1.1. Ideas: Refers to activation of previous topic knowledge</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1.2. Ideas: Refers to awareness of reading or listening for topic information</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1.3 Ideas: Refers to awareness of thinking critically about or beyond the content in readings or listening files in order to build ideas for writing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Language below Sentence Level</strong></td>
<td>2.1. Vocabulary: Refers to awareness of spelling knowledge</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(Vocabulary)</td>
<td>2.2. Vocabulary: Refers to use through collocations or synonyms</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2.3 Vocabulary: Refers to awareness of appropriate academic vocabulary</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2.4 Vocabulary: Refers to awareness of inferencing words in context, using word parts, or using explanation to determine word meaning</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Language below Sentence Level</strong></td>
<td>3.1 Sentence grammar: Refers to awareness of parallel structure</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(Sentence Grammar)</td>
<td>3.2 Sentence grammar: Refers to awareness of subordination and coordination</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3.3 Sentence grammar: Refers to awareness of article and determiner use; parts of speech</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3.4 Sentence grammar: Refers to awareness of the form and use of the passive voice</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3.5 Sentence grammar: Refers to awareness of other grammar and punctuation</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Discourse:</strong></td>
<td>4.1. Refers to awareness of essay organization (thesis)</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Language Use above the Single Clause</td>
<td>4.2. Refers to awareness of text organization (genre)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>4.3. Refers to awareness of paragraphing</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4.4. Refers to awareness of cohesion</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Regulation of Reading and Writing</strong></td>
<td>5.1 Refers to awareness of planning the task</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Task Processing</strong></td>
<td>5.2. Refers to awareness of the importance of audience</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5.3 Refers to awareness of revising/editing text for grammar and sentence errors.</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>5.4 Refers to awareness of assessing ideas and structure.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>5.5 Refers to awareness of summarizing/paraphrasing</td>
<td>38</td>
<td>26</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td></td>
<td>97</td>
<td>47</td>
</tr>
</tbody>
</table>
The battle of paraphrasing

Sophia had emphasised the essential steps for paraphrasing as 1) having distance from the original (not looking at the original text while paraphrasing), 2) using synonyms, 3) changing the sentence order, sentence type or combining sentences, 4) using passive, and 5) changing the parts of speech. To prepare for the task, Sophia’s main teaching focus was synonyms and collocations related to the topic. Examples had been written on the board, and students had also generated examples. Sophia had continually reminded the students that synonyms are one of many paraphrasing strategies, and she warned students that just replacing original text with synonyms could be deemed plagiarism due to the similarity to the original text. Thus, emphasis was placed additional strategies for successful paraphrasing in the lessons. In the following examples from the stimulated recall data, students read their paraphrases but also had the course text open to the pages of the original text for reference. For the ease of analysis of the stimulated recalls, the original text follows:

Vaccines are among the safest tools of modern medicine. Serious side effects are rare. For example, severe allergic reactions can occur but they very rarely do. In Canada, this kind of reaction has occurred less that once in every million doses of vaccine, and there are effective treatments for this condition. The dangers of vaccine-preventable diseases are many times greater than the risks of a serious adverse reaction to the vaccine. For information on who should not receive specific vaccines, please see the Contraindications and Precautions section of each vaccine chapter in the 2002 6th Edition Canadian Immunization Guide. Minor side effects from vaccines, on the other hand, are common. Many patients get a mild fever after immunization or soreness where they receive the injection. These reactions are a nuisance, but do not usually last long. They can be part of the body’s normal response to the vaccine.

No one in the field of public health takes the safety of vaccines for granted. Vaccine safety is an international concern. Information on possible safety concerns is communicated very rapidly among different countries. This careful monitoring ensures that public health authorities can act quickly to address concerns. In addition, research continues to improve vaccines. (Williams, 2005, pp 125-126)
Vladimir had not written a paraphrase of the above text; rather he had written a short summary of 99 words, while the original text was 202 words. However, he was unaware that this paraphrase should be as long as or longer than the original. He commented before reading, “How I did the paraphrasing? First I read all the text and tried to understand it. Well I started from the first paragraph, I mean I looked for the most essential things in the text” (5.5). When reading the beginning of his paraphrase, “Besides the small allergic responds of the body, vaccines are safe,” Vladimir commented, “...What about synonyms? I use the synonym ‘respond’ except the ‘occur’. ‘Allergic reactions can occur’ is in the text. I used small allergic responds” (2.2). Even though the word choice ‘responds’ was inaccurate, Vladimir had attempted to use synonyms in his paraphrase.

In another ECL, Vladimir read, “However, those effects are negligible in comparison to the disease that had been prevented,” and recalled:

Vladimir: Well this sentence is for me is complicated. I used the ... uh ...the form of verb ‘had been prevented.’ I mean that is passive voice, right? This sentence delivered information from the text about the adverse reactions.

Researcher: What about vocabulary?

Vladimir: I add the word ‘negligible.’ That’s it. (2.2, 3.4, 5.5)

Using synonyms was challenging for Vladimir because he was unsure of the meaning of the original text. He read, “The safety of inoculation is a world-wide agreement in the public health care,” and reflected:

Well I paraphrased the original sentence. Well again. I wasn’t really sure of what does it mean by the “No one in the field of public health takes the safety of vaccines for granted.” I did not use this words before, I actually am not sure what does it mean by context. In my case, I replaced this word with ‘world-wide agreement.’ That is my feelings and my guess about meaning. And also the field of public health, I replaced by in the public healthcare. (2.2, 2.4, 5.5)

Despite attempting to guess the original vocabulary meaning from the context, he was unable to maintain the original meaning of the text. Even though he knew it was important to
change the vocabulary, Vladimir struggled to find the appropriate academic word choice. “Any improvements in effectiveness of vaccines and safety concerns reach immediately other countries.” About this, he remarked:

...For the synonyms I tried to use effectiveness, and also the synonyms of inoculation and vaccination and injection...I had problems with the synonyms, effectiveness ... it needed better more academic words rather than bad and good.

The original sentence that Vladimir had attempted to paraphrase was “Information on possible safety concerns is communicated very rapidly among different countries” (Williams, 2005, p. 126). The word choice of ‘effectiveness’ carries a different meaning to the original text’s ‘safety concerns.’ Nevertheless, Vladimir was aware of the need to change the paraphrased words from the original words.

In his ECLs, Rehan was also very aware of the need to change vocabulary. He read the beginning of his paraphrase, “Immunizations have very little side reactions that are fatal. This fact makes them one of the least risky tools of present day medicine.”

The word in the book was vaccines so I changed it to immunizations. In the book it was the last word in the sentence, so the sentence in the book was like “amongst the safest tools or modern medicine. Serious side effects are rare.” I changed to it little side reactions. I connected both of the sentences together. (2.2, 3.2)

Rehan continued, “The risks of fatal side effects are far less than the danger of the diseases than can be halted by immunization.” He remarked:

The book has it the other way around. The book say adverse. This is a classic example of paraphrasing. I inverted the structure the other way around, and I changed the words. I used the words fatal side effects rather than...severe adverse reaction. The book used prevented, and I used halted. (2.2, 3.2, 5.5)

Similar to Vladimir, Rehan was aware of the strategy for using synonyms, yet his synonym for ‘adverse,’ which was ‘fatal,’ changed the original meaning of the text.

Before Keith read his paraphrase aloud, he made an overall comment about his paraphrasing experience:
At first I kind of switched the order a bit because there are two paragraphs, and I did the second one first. And then the way I did this basically, I used the method Sophia taught us. Changing sentence structure, using synonyms - something like that. But I usually don’t use the passive form of it because I get mixed up with it. I usually avoid using it. You see me using like paraphrasing and changing sentences. (2.2, 3.2, 3.4, 5.5)

Keith was uncertain if titles change in paraphrases. “However, exceptions are still possible. For who shouldn’t take specific vaccines please read the Contraindications and Precautions section in the 2002 6th Edition Canadian Immunization Guide.”

Keith: This I can’t change it. I have no clue. It is almost exact to the book. This kind of like an example in the book. Kind of like a reference.

Researcher: Is it the same?

Keith: Almost. I have no clue how to change it. I don’t think I should. (5.5)

As well as the title, Keith’s sentence was almost identical to the original text with only a few synonyms such as ‘take’ instead of ‘receive’ and ‘read’ instead of ‘see.’ Similar to Keith, Armando also had difficulty and uncertainty about how to paraphrase the text that had the title, ‘Canadian Immunization Guide.’ He read and then commented:

“Canadian Immunization Guide in the 2002 edition display a clear information on who should not have specific inoculation. The guide mentioned above state clearly that some patients experience annoying feelings, although it does not last long time.”

Well it was for me kind of difficult. What should I put, the whole thing or should I change to synonyms? Then I decided well it really does not matter much. It is just a guide. It is just a brochure. To get the idea and to avoid some kind of repetition which is why I made it kind of short. I am not sure about that. (2.2, 5.5)

When prompted to comment on the use of vocabulary in this episode, Armando commented, “I was hesitating about using ‘feelings,’ because I know it is okay sometimes. It is a kind of synonyms to heart, but I was not sure if I can use it as a physical reaction. But I did what I did” (2.2). In a later episode, Armando was more certain about his choice of words:

“...Vaccine is always on the way to augment effectiveness,” as he commented, “The book says
‘In addition research continued to improve vaccines.’ I put ‘Vaccine is always on the way to augment effectiveness.’ Augment is from the class. Is good’ (2.2).

Armando had good awareness of paraphrasing strategies as well as understanding the dangers of using just synonyms as being poor paraphrasing. ‘This is just first to grab the idea and to translate the idea into my own words. Sometimes it is very hard to start a sentence and to avoid to copy. Also, just to try to use synonyms that fit okay there. I don’t know. I did not find it so difficult. Maybe I did not do it right’ (2.2, 5.5).

Eva sometimes struggled with vocabulary as is evidenced in the following episode. The original text read as, “For example, severe allergic reactions can occur but they very rarely do. In Canada, this kind of reaction has occurred less that once in every million doses of vaccine, and there are effective treatments for this condition” (Williams, 2005, p.126). Eva read, “For instance, even though the allergies can not be avoid absolutely, the occurrence are so rare that the rates of allergies is smaller than millionth, moreover, effective solutions can deal with the side effects.” She then speculated:

Eva: There’s a word I am not very sure about, its function. The meaning.
Researcher: What word is that?
Eva: Millions. I just tried to paraphrase. I just tried to combine several short sentences into uh…one sentence. Yea I changed the sentence structure and used some transitions and I just changed some words.

Despite the grammatical inaccuracy, Eva had paraphrased using a number of strategies; however, the word ‘million’ had been a challenge for her as she changed it to ‘millionth.’ Sophia had told the class that a number did not require a paraphrase.

As in her previous stimulated recalls, Eva expressed a concern for her audience and whether her meaning would be clear, “After immunizing, many patients catch a slight fever or feel aching at the injecting spot in the body,” and she reflected, “I dunno if it is confuse people if I say injecting spot. I don’t know about this word ‘spot.’ Yeh” (2.2). Eva continued with
concern about her choice of vocabulary. “The safeness of vaccines cannot be guaranteed in the area of public health.” As she commented, “Actually I do not know original meaning of ‘Take for granted.’ Is that…? Hmm…My understanding might be associated with the guarantee. Is it clear?” (2.2, 5.2).

In contrast to Eva, Jessica seemed confident with her paraphrasing abilities and in her stimulated recalls, and made little reference to vocabulary or difficulties with word choice. In the following episode, her word choices ‘adverse reaction,’ and ‘receive an injection’ were the same as the text. Nevertheless, she was aware that it might be too similar. Jessica read.

“Besides, negligible adverse reactions are common. It is normal to have reported that there is a mild fever after being vaccinated or soreness where the injection is received,” and then commented, “It’s pretty much the same as the original. I kept mild fever. I omitted the word ‘patients’ and then made it passive. I changed some words like immunization” (2.2, 3.4, 5.5).

In another episode, as Jessica read another paraphrased segment, “It is important to communicate with different countries about the information on vaccines safety. Thus, public health authorities can respond promptly to deal with concerns. Moreover, research contributes to the improvement of vaccines,” she commented, “I think the sentence structure is pretty much the same. I just changed the word. For me, changing the sentence or stepping out to rethink is hard….Um. Vocabulary is not that strong, but it is okay” (2.2, 3.2, 5.5).

**Passive voice and sentence variety as strategies**

In Week 6, before the task, Sophie had practiced paraphrasing using another section of the same article from the course text that the students would ultimately paraphrase themselves (Williams, 2005, p.125). Students were asked to paraphrase paragraphs on pages 125 and 126, preceding the assignment text, and these were written on the board. As she did this, Sophia
modelled and reminded the students of other paraphrasing strategies including the use of the passive voice and changing sentence structure.

In the stimulated recall, Vladimir was able to identify the strategy he had used in paraphrasing the first sentence of the text, “*Besides the small allergic responds of the body, vaccines are safe,*” by saying, “I include the important information. I tried to paraphrase. I used the section option of paraphrases. I changed the sentence structure. Anyway changed the structure” (3.2, 5.5). He commented on another paraphrased sentence: “I feel it was okay. If there are two sentences I can always state it in one” (3.2).

Before Rehan began his stimulated recall, he commented on his paraphrasing skills:

I think it was fairly easy because I’ve done lot of paraphrase a lot in science. When you take first year arts courses you also have to write essays where you paraphrase. My basic paraphrasing technique was to change the sentence structure, usually invert it, and to change the vocabulary, use synonyms. I’ve seen this a lot of times. The new things I learned was passive and active voice...(2.2, 3.2, 3.4, 5.5)

Keith also made a general comment about his paraphrasing skills before he started reading his work:

At first I kind of switched the order a bit because there are two paragraphs and I did the second one first. And then the way I did this basically, I used the method Sophia teached us. Changing sentence structure, using synonyms something like that. But I usually don’t use the passive form of it because I get mixed up with it. I usually avoid using it. You see me using like paraphrasing and changing sentences. (2.2, 3.2, 3.4, 5.5).

As well as referring to sentence structure, Keith also pointed out another important aspect of paraphrasing: not adding personal opinion. “*Modern medicine makes vaccines the safest tools. Major reactions occur are slim. There are not much cases of allergic reaction. The ratio of an allergic reaction is one in every one million doses of vaccine.*” He commented, “Um …I was like the same as paragraph one changing the sentence structures. The information is fixed, and I can’t add personal information into it” (3.2, 5.5).
However, Keith did admit that he had essentially summarized the text, rather than paraphrasing, “At the end I summarize much more. Cos there is too much not important information in the book. It is not useful. Also, that part was hard to do, so I made it short” (5.5). When prompted to reflect upon the ease of completing the task, Keith replied, “Paraphrasing is not as easy as it looks. To do good at it, you have to do a couple more times to get good (5.5).

Interestingly, Armando made no reference to sentence structure in his stimulated recalls. His main focus had been on using vocabulary and on capturing the essence of the main idea of the text. When asked about how he felt about paraphrasing, he commented, “I feel okay. Because I thought I grab the idea and to write in the best way I can and to avoid what the writer say exactly” (5.5). Similar to Keith, he had written a summary rather than a paraphrase.

Eva wrote a more complete paraphrase than both Keith and Armando. Her main ECL focus was vocabulary, and she made little reference to sentence structure except for this one episode. “Nonetheless, the annoying effects which just last a little while are the normal reaction of the body to vaccinations,” and she commented, “The original one was don’t last a long time, so I just changed some sentences. I combined some sentences” (3.2). When asked about the ease of paraphrasing, Eva commented:

It’s hard. Maybe some proper synonyms. Some synonyms still have a little different meanings. I try to do not change the original tone. It’s hard. Some vocabularies is hard. I think next time I think I should read the whole paragraphs first. My paraphrasing lack of coherence. It needs to look like a paragraph. (4.4)

Jessica was able to identify why she had some problems with her paraphrasing and stated them as she read her first part of the paraphrase, “Among the modern mainstream medicine, vaccines are the safest instrument of preventing diseases that severe adverse reactions are uncommon.”

...I have some problems of paraphrasing because I can’t step away to think. Because when I see a sentence, I can’t really do that change of structure. You can
see that I kept some of the words, but I changed the order. I put modern medicine first (3.2, 5.1, 5.5).

Being able to step away from the original paraphrase was the first step that Sophia had mentioned as a strategy. Jessica was the only focal student to mention this important paraphrasing step even though it had been difficult for her.

Overall, the focal students found paraphrasing challenging due to limited vocabulary. Nonetheless, as the stimulated recalls indicated, students were aware of the steps of paraphrasing and attempted to employ them despite the challenges. The students’ struggles with vocabulary sometimes originated from not having a true comprehension of the text or, in other cases, it may have been a lack of depth or breadth of vocabulary that created the uncertainty. Much of the data revealed that the paraphrases had chunks of vocabulary that bore similarity to the original text or perhaps had different word forms such as ‘safety of vaccines’ being paraphrased to ‘safeness of vaccines’ or ‘vaccine safety’ or ‘vaccines are safe.’ Howard (1995) would have called this patchwriting and that it can be an indication of learners not being familiar with new vocabulary or content. In this case, the topic of vaccine safety was new to most of the focal students. Similar to the students in Casanave’s (2012) study, these focal students do not view their closeness to the text as a form of plagiarism. To the contrary, they believed they were paraphrasing. Casanave pointed out that patchwriting is indicative of novice writers. Howard (1995) also posited that patchwriting is a natural transition from being a novice to being part of an academic discourse community. Sophia’s approach of focusing on the strategies of paraphrasing and providing opportunities for practice is what Casanave (2012) claimed to be important for first year university students as it takes years to become a paraphrasing expert. Keith had summarized instead of completely paraphrasing the text as he claimed it had been easier and less
linguistically challenging. As the next section reveals, the summary was deemed by all the students to be an easier task to complete.

**The ease of summary writing**

The data in this section are not presented thematically, as no significant theme emerged; rather, the section presents a general overview of the students’ recalls of summary writing. Overall, there were fewer ECLs than in the paraphrasing task, which may relate to Sophia’s change in teaching style in Week 7 (see Chapter 5). Another reason might be that students had to summarize part of the same text as the paraphrase assignment even though the assignment required students to include an additional 30 lines of the text in the summary.

One aspect that Sophia emphasised was that the summary needed to begin with a thesis statement, which could be determined by reading the article for the main idea. Vladimir confirmed this with his statement, “Well, first of all, I need to start from the thesis statement. I read the whole text and found the most information in the article. I found that Canada Health explains in the article how vaccination benefits in comparison with the rare risk of side effect (1.2, 4.1). Having received the feedback on the paraphrase assignment, Vladimir realised that he had summarized instead. He commented, “Since last week in my previous work, I did summary instead of a paraphrase. I did not make much change. I kept the first part, and I threw away the minor information. I removed unspecific information, and I worked on my mistakes. Today, I summarized the rest of the article” (5.3, 5.5).

When asked to compare the two tasks in terms of difficulty, Vladimir commented:

*Summary is much, much easier. We need smaller information. When we read something, we summarize it in our mind. We pull out the important information and remember it. Paraphrasing is hard because I have to have the same length of the article. I can’t remove anything because it is all important. A lot of work.* (1.2, 5.5)
Similar to Vladimir, Rehan had essentially written a summary for his first task as he had omitted too much information for the task to be considered a paraphrase. Consequently, the second task was quite easy for him to complete. In one of his episodes, he read and commented, “Pharmaceutical companies keep updating their vaccines according to the recommendations of health organizations, to make them a hundred percent safe. This argument was a big one in four or five paragraphs, so I summarized it into two lines” (5.5). However, at the end of the summary, Rehan had added a conclusion that was not part of the original text, “Therefore, Canadians should have nothing to fear from vaccinations and must get vaccinated.” The article was long (5 pages in total). However, the concluding paragraph (Williams, 2005) did not convey the same idea as Rehan’s summary. The original text stated, “By providing vaccines in a climate of informed consent…immunization will maintain its status as one of the most effective preventative measures in the history of medicine” (p.130). Rehan seemed to have expressed his own opinion in the final part of the summary.

Rehan was asked to comment on the ease or difficulty of summarizing and paraphrasing and his answer was very astute as it demonstrated an understanding of learning a language and the need for fluency in reading comprehension:

When I read as an ESL student, now I am starting to think in English which is necessary for academic language. Because I read a lot of biology journals in English. For me to go back to my native language and then come back to English. I takes me a lot of time, and that is a big factor for a lot of ESL students because that does stop their capacity, limit their thinking to a certain level, coming back and going forward, whereas the same neurons can be used for other things. Nowadays, I try to comprehend stuff in English, because I am trying to comprehend in English all the time, it comes to me naturally how do you comprehend a big reading. All I needed was to get the main line. It does come to be that I can summarize in my head. (1.1, 1.5).

Similar to Rehan, Keith also had written a summary in the first task instead of a paraphrase because “I looked at the chunks that she gave us to read, I thought it was not
important information, and I skip a lot, and I added a few more sentence” (5.5). Keith rationalized why he felt found the summary to be an easier task than writing a paraphrase. He thought lack of vocabulary could impact the task’s success, and this is perhaps how he made the error in the first task. He reflected:

The summary is easier. Less in it, the paraphrase is harder because you need the words, the vocabulary and the ideas. You might have the ideas, but if no words, so you can summarize by mistake. You have to avoid plagiarizing, and you really have to understand the article in order to know how to rewrite the thing. (2.2, 5.5)

Jessica was also confident with writing the summary. Her first comment was about the structure and the need for a thesis or main idea in the beginning. “As Health Canada states in the brochure ‘Vaccine Safety’, the dangers of infectious diseases are a lot greater than the risk of immunization itself.” She commented, “As Sophia said, we have to include the thesis. This is the main purpose of that section” (4.2). Unfortunately, Jessica’s thesis was directly copied from the text. Despite this, she was very cognizant of having to shorten her paraphrase to include just the main points. She read, “People are re-assured that vaccines are the safest instrument of preventing diseases. Severe adverse reactions are uncommon and even if such reactions do occur, there are also some effective treatments for that in Canada. I shortened the paraphrase into two sentences” (5.5).

Jessica’s treatment of the new text was to summarize 15 lines of text into two sentences. She read and then commented:

Moreover, research contributes to the improvement of vaccines. Examples are given that vaccine quality is constantly improving that adverse reactions are less common. In regards to vaccine safety, it is important that both risks and benefits are also taken into consideration.

This is the new section. Um, I heard from Sophia that we should not include so much detail and data, so I just briefly wrote the examples what the improvements were… are.” (5.5)
When asked how she felt about paraphrasing and summarizing, Jessica was able to explain why she had some confidence in doing both tasks. “I think before this class because I’m in sociology, I have to paraphrase so many text books’ information into essays. I think I am okay. After this class, I learned more techniques for paraphrasing. But summary is more easy” (5.5).

Eva also began her recall with commenting on the need for a summary overview. “As health Canada illustrates in the article “Frequently asked questions,” vaccinations with infrequent severe side effects are considered as the safest instruments to prevent diseases in contemporary medicine. So basically it is a copy of the original paraphrase. The first sentence can be a statement to give an overview of the whole paragraph” (4.2, 5.5). Eva was also aware that her summary had to be concise and not include details. “However, negligible adverse reactions which are the normal reactions of the body to vaccinations occur commonly. Before I write the summary, I read the whole paragraph. I just tried to keep the main points” (5.5). Like Jessica, Eva had summarized a section of detailed text into a concise statement, “Furthermore, several examples prove the continuous improvement of vaccines. I didn’t mention details or examples” (5.5).

Eva was also asked to comment on the two tasks, and similar to the other focal students, she concluded that summarizing is easier than paraphrasing:

I’m much like the summary. Yes. It’s shorter from the whole paragraph it is easier to know the whole ideas. It is easier to follow the sentence and follow ideas smoothly. The paraphrase I have to follow words one by one. That is more hard. (5.5)

In conclusion, the students all identified summary writing as being an easier task than paraphrasing. Hirvela (2004) links reading and then writing a summary as a main academic
activity that demonstrates comprehension. Most focal students mentioned the ease of looking for the main points in the reading.

However, novice writers still may patchwrite when summarizing (Keck, 2014). In Keck’s recent study, first year university students tended to copy text or slightly alter text in the summaries. She suggests that with expertise, students are able to identify and summarize key points by creating the gist of the text and only paraphrasing the key main idea. Similar to the students in Keck’s study, some of these focal students paraphrased the thesis, for example, Eva. Interestingly, Eva, new to the Canadian education system, wrote a thesis that was a paraphrased overview of the article. However, in Jessica’s thesis “As Health Canada states in the brochure ‘Vaccine Safety’, the dangers of infectious diseases are a lot greater than the risk of immunization itself,” the bolded words are directly from the text, yet Jessica’s perception was that she had a clear thesis and had summarized the text. Furthermore, in Jessica’s summary, the bolded words are identical to the original text, “In regards to vaccine safety, it is important that both risks and benefits are also taken into consideration.” This is similar to Keck’s (2014) results where students unsuccessfully attempted to paraphrase parts of the text rather than summarizing the overall ideas. Rehan’s comments regarding fluent reading being essential to good summary writing concur with the Shi’s (2012) belief that expert summary writing “requires one’s own thinking in selecting, combining, and condensing information into its gist” (p.136). Overall, as the participants indicated, summary writing seemed less linguistically challenging than paraphrasing.

The argument essay

In Week 8, Sophia taught both the vocabulary pertaining to writing an argument as well as the format of the genre. The assignment was to respond to the essay statement (Williams, 2005, p.180) ‘Genetically modified foods benefit only farmers.’ The chapter had two readings
and a sound file. The students were provided the essay question on the first day of Week 8. The task was to include two paraphrases from the readings and to search for an outside academic source on genetically modified foods, which was to be paraphrased in the essay. Students were given an essay outline to prepare for the writing day. The word limit including paraphrases was 500 words; consequently, Sophia had allotted the entire class time for writing. The stimulated recall data for this essay were analysed from the first draft only of the assignment as I was at a conference when students wrote the second draft. Unfortunately, Vladimir missed the in-class writing session and wrote in Sophia’s office; therefore, there is no recall data from him.

**Episodes of Cognitive Learning: Argument essay**

Table 22 below describes the stimulated recall data for the first draft of the argument essay. Despite the assignment being longer than the previous assignments and having the added task of paraphrasing, the data analysis still revealed 46 ECLs even though the students tended to read longer chunks of text in their stimulated recalls than in the previous assignments.

<table>
<thead>
<tr>
<th>Focal student</th>
<th>Total for Draft 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vladimir</td>
<td>Did not write the draft in the session</td>
</tr>
<tr>
<td>Rehan</td>
<td>10</td>
</tr>
<tr>
<td>Keith</td>
<td>8</td>
</tr>
<tr>
<td>Armando</td>
<td>7</td>
</tr>
<tr>
<td>Jessica</td>
<td>11</td>
</tr>
<tr>
<td>Eva</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>46</strong></td>
</tr>
</tbody>
</table>

To fully examine the learning, Table 23 summarises each student’s episodes according to the criteria from *the Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning*. The data show that most student recalls focused on *Discourse: Language Use above*
the Single Clause (34 ECLs) and Regulation of Reading and Writing Processing with (23 ECLs).

Ideas and Information was another aspect to which the learners referred.

Table 23
Argument Essay: Frequency of ECLs by Category

<table>
<thead>
<tr>
<th>Focal student</th>
<th>Multi draft</th>
<th>Ideas and Information</th>
<th>Language below Sentence Level (Vocabulary)</th>
<th>Language below Sentence Level (Sentence Grammar)</th>
<th>Discourse: Language Use above the Single Clause</th>
<th>Regulation of Reading and Writing Processing</th>
<th>Total ECLs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehan</td>
<td>Draft 1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Keith</td>
<td>Draft 1</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Armando</td>
<td>Draft 1</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Jessica</td>
<td>Draft 1</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>9</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Eva</td>
<td>Draft 1</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>14</td>
<td>6</td>
<td>4</td>
<td>34</td>
<td>23</td>
<td>83</td>
</tr>
</tbody>
</table>

Table 24 examines the general strategies that emerged for each draft. Similar to the analysis of the teacher data in Chapter 5, the student data could have more than one learning focus in a singular ECL. Reading for ideas and for material for appropriate paraphrases was an essential element of the assignment as is reflected by the ECLs in Ideas and Information (1.2 reading or listening for topic information). Two other main areas of learning were in the category of Discourse: Language Use above the Single Clause category (4.1 and 4.2 essay and text organization) as this genre was new to the students. Another area of focus was Regulation of Reading and Writing Task Processing (5.5 paraphrasing and summarizing), a reflection of the task requirement. These specific themes are discussed in the following sections with examples from the students’ stimulated recalls.
Table 24
*Argument Essay: Frequency of ECLs by Strategy*

<table>
<thead>
<tr>
<th>Categories</th>
<th>Focus on learning</th>
<th>Dr 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ideas and Information</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1. Ideas: Refers to activation of previous topic knowledge</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1.2. Ideas: refers to awareness of reading or listening for topic information</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>1.3. Ideas: refers to awareness of thinking critically about or beyond the content in readings or listening files in order to build ideas for writing</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Language below Sentence Level (Vocabulary)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1. Vocabulary: refers to awareness of spelling knowledge</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2.2. Vocabulary: refers to use through collocations or synonyms.</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2.5 Vocabulary: refers to awareness of appropriate academic vocabulary.</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2.6 Vocabulary: refers to awareness of inferencing words in context, using word parts (morphology), or using explanation to determine word meaning.</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Language below Sentence Level (Sentence Grammar)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Sentence grammar: Refers to awareness of parallel structure</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3.6 Sentence grammar: Refers to awareness of subordination and coordination</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3.7 Sentence grammar: Refers to awareness of article and determiner use; parts of speech</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3.8 Sentence grammar: Refers to awareness of the form and use of the passive voice</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3.9 Sentence grammar: Refers to awareness of other grammar and punctuation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Discourse: Language Use above the Single Clause</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1. Refers to awareness of essay organization (thesis)</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>4.2. Refers to awareness of text organization (genre)</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>4.3. Refers to awareness of paragraphing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4.4. Refers to awareness of cohesion</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Regulation of Reading and Writing Task Processing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1. Refers to awareness of planning the task</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>5.2. Refers to awareness of the importance of audience</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5.5 Refers to awareness of revising/editing text for grammar and sentence errors.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5.6 Refers to awareness of assessing ideas and structure.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5.5 Refers to awareness of summarizing/paraphrasing</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Totals:</td>
<td>83</td>
<td></td>
</tr>
</tbody>
</table>

*Preparing content for the argument and the dis-ease of the structure*

Students were given the topic on the Monday prior to the Friday writing class. They were told that they needed to have two paraphrases from the course text’s articles (Williams, 2005, pp.184-195) and to find an extra article on genetically modified foods to paraphrase. Since the
assignment required thought and planning, students were allowed to write an outline at home, which they could refer to when writing during the class. The topic was new to some students, and Sophia had spent time developing vocabulary, discussing ideas, teaching the argument structure and continuing with paraphrasing skills. Assignment preparation required reading for ideas that could be integrated as paraphrases into the body of the essay along with the students’ own ideas. The essay task was to write five paragraphs (500 words): an introduction, a concession, two proofs or arguments, and a conclusion with a recommendation.

On the day before the writing assignment, Sophia had modelled the argument structure by creating an expanded outline on an overhead. This means that rather than outlining in point form, Sophia had written full sentences as a scaffolding strategy (See Appendix O). In order to scaffold learning, she had used the same topic as the students would use the following day. This outline is described in detail in Chapter 5. Students were allowed to copy down the outline, but were warned of plagiarism if they used the same ideas. Sophia felt that the course text, the sound file and the students’ researched articles would give enough different content ideas and allow students to use their own ideas as well.

Sophia’s explicit modelling of the outline included an introduction that had a hook and moved from general to specific with a thesis statement that included the antithesis as well as the two points being argued. She recommended beginning the thesis statement with “Even though…” so that both sides of the argument were shown. The second paragraph was the response, which included a concession to the antithesis with examples and then a refutation that became the link to the two body paragraphs or proofs. The conclusion was extended to include a restatement of the thesis, a call for action, and a recommendation.

Rehan began his stimulated recall session by commenting on the assignment:
Sophia gave us the topic a day ago, so I spent the whole night writing an essay. I had the citations already. I had a lot of time for essay last night, essentially four of five hours. So I wrote it at home first. I did not want to write about health. The topic was about the benefit of GM food so I chose to agree with the topic and not write about how it is bad for the health. (5.1)

Seemingly, he had not followed the criteria set out by Sophia; however, at the time of the recall, he did not seem concerned that he was not supposed to have pre-written an essay at home. It should be noted that he missed the two classes prior to the writing assignment, where Sophia had specifically modelled the structure, had spoken about not plagiarising and commented that outlines only and not essays were to be brought to class.

He read the beginning of his essay: “Our food supply chain has been changed for over a decade by new technology of genetically modified foods.” My hook is similar to the hook line all the articles used, and I can go to my point in context and that was “Many believe that this technology has helped the world to gain a greater food supply” And then I just went to main topic” (4.1). Rehan had drawn upon his knowledge of bio-med as he read his first body paragraph:

Monsanto has created something called Bovine-Somatropin, also known as BST. This type of Bovine growth Hormone helps farmers to produce more milk. This gene is injected into cows to “increase [their] cell division [to help produce] up to 40 percent more milk” (1) ... Due to the introduction of GM foods, many organic and conventional farmers claim that they have lost their premium markets by selling their crops with in the GM crop streams (2). But this is not true.

Throughout his stimulated recall, Rehan referred to the content of his essay rather than commenting on other aspects of learning. He had a number of quotes (not a task requirement), which was likely because he had pre-written the assignment at home and had had the time to research. It is unknown if the paragraph had elements of “patchwriting” as the original text was unavailable. Most of Rehan’s content was related to what he had read about Monsanto and BST, with little incorporation of his own ideas.
Rehan had missed the class with the demonstration of the outline; consequently, his format did not follow the five-paragraph argument format. When prompted in the recall about his paragraphing to see if he would identify the parts of the argument essay, he had commented:

Researcher: How do you see this paragraph?
Rehan: I see it as telling how GM food help farmers and companies. Because of the word limit I did not go into the economics.
Researcher: What paragraph was this?
Rehan: This was my second, no I guess my third paragraph. The next is my fourth. (4.1)

The only place he referred to one of the essential elements was in his conclusion:

*Therefore, governments must continue to fund GM research and subsidize GM seeds because they benefit the farmers, GM companies and the common people.*

This is my recommendation because Sophia wanted it in a way that you recommend and use words like ‘must’ and ‘should.’ (3.5, 4.1, 4.2)

Keith, on the other hand, drew upon ideas that had been generated in the classroom. He read his introduction and commented:

*Hunger is the last thing to leave the human’s soul when people die. Not everyone in this planet can taste various types of foods and some of them even wasting it. Every year in this planet can taste various type of foods and some of them even wasting it. Every year, there are more than thousand of people dying from hunger because of poverty. As a result, scientists have research and developing solution against hunger. GM foods is the solution they discover. Even though GM foods have benefits to humankind, threats also lie within GM foods.*

Keith: Basically, Sophia in the last class was explaining the outline. She relate back to the hunger. First sentence is cause when people die they give up hope and hunger. First sentence is the hook. And then is the context of the essay about the foods and people dying and then the ‘even though’ part is the antithesis which is what she wants.

Researcher: Why do you have the plus marks here? Scientist plus a check and poverty plus a check.
Keith: Oh they are notes on words in case I spell it wrong, so I can check it.
Researcher: Did you check them?
Keith: Yeah I did. (2.1, 4.1, 4.2, 5.1)
As well as using some helpful strategies for vocabulary, Keith had clearly spent time
listening to the sound files and reading articles for the course text in order to gather information
for his writing. He read his entire first argument paragraph and reflected on how his content had
been informed by the texts:

(1) According to the narrator from the sound file, scientists might face different
animal or plant gene to create GM foods. If a person is allergy to nuts and
brought Canola oil that fused with nut gene, It would not be a pleasant sign after
using it without knowing it contain nut. People who have allergy should be
careful with GM food. Government should regulate GM foods and give out
warning to consumers.  (2) The narrator also suggested that GM foods post
danger to environmental health. Cross-pollination might breed a new kind of
superweed that might be resistant to all herbicides, Superweed will start to
dominate all the domestic plants and not stopping toward it.  It is very crucial this
should not happen.  This is a matter that not just relate to human, it is a issue that
relate to earth.

Basically like the first part is— the one is a paraphrasing for the sound file. It is
about the stuff that is added to nuts and stuff. The sound file had a lot of
examples. The second part is the superweed that is the other detail, and I
paraphrased too. (1.2, 5.5)

When reading his second proof, Keith provided further rich data as to how his content
had been informed by the readings and the class discussions:

Indeed, human is the most intelligent species living in the planet. It is because
human have the capability to think and improve. It doesn’t mean that human have
the right to play god. It is against mother nature, the cycle of life will be ruined,
In addition, if the consumer is a vegetarian and consumer food that were fused
with animal gene; it is somehow against the consumer’s will. The consumer ethic
might be broken if consumer’s religion is against eating animal. Consumer will
be full of regard after eating one wrong food.

This is the second proof. I wrote that in the margin too. It is basically saying that
we as a human should not play God as that is against Mother Nature. This is
more of my own thinking than paraphrases. Some of the idea are from the sound
file. It is stuff that we talked about too. The vegetarian is a topic we talked about
in class so I fused the idea into one. (1.2, 1.3, 4.2, 5.5).

Keith was very aware of the organization of the argument essay and used the strategy of
writing the name of the part of the essay in the margin, “I wrote ‘Response’ so I remember the
part of the essay I am writing. So I can separate myself from each part so I don’t get mixed up”
(4.2). He even had noted his conclusion, “I wrote conclusion here in the margin (laughs). I really did not want to get lost” (4.2).

Armando continued his struggle with writing tasks. Once again he had a disorganized structure that had some paragraphing, one very short single sentence paragraph and even two bulleted points at the end of the essay. His essay was approximately 260 words. He stated that the topic did not interest him and that he had found the timed writing frustrating. He needed the time to write, reflect and rewrite. Furthermore, his challenge of understanding and creating an essay using a specific format baffled him. When he began his stimulated recall, he was distressed and commented:

Armando: I was completely lost. I need more time. I need more days to think what I write. Sometimes I am stuck on one sentence for 10 minutes.

Researcher: What were you stuck on?

Armando: I wonder how to keep going. I don’t know what word to use it. What should I say?...I don’t know. I made an outline but writing for me is a very slow task. I need to think a lot. I like to write and to come back and correct. And this does not sound right, so I’m going to say this and this and this. You know. Subject like that I do not like. I like more philosophy. It make me think. I enjoy it philosophy, and I can put ideas together. But when you come to a subject like food. It does not really touch me at all. I know it is a good subject, but for somebody else. (2.2, 5.1, 5.3)

Furthermore, Armando seemed to have difficulty identifying if he had paraphrases in his writing and made no reference to them in any of his recalls as is exemplified in this one ECL:

Even though GMF food provide excellent resources to control crop diseases, more research has to be done to avoid unexpected negative outcomes.

What I was reading is that they are trying to inject a gene from a fish into a plant and to provoke some result and they are not thinking what the future effect. (1.2)

When asked if he had previously written research essays, he replied, “Oh yeah! I wrote a geography essay, and I researched 5 books and it was easy to do. I even got 90 percent. But I have lot of time, and I like the topic.” He may not have understood the required five-paragraph
structure for the genre, but he was able to synthesise ideas from the readings, add his own thoughts and his vocabulary was adequate for the task. The following is one of the proof paragraphs he read aloud, and commented:

*GM food is a danger to human health, environmental health and human ethic. Some people are allergic to nut and nuts have been added to Canola oil. Another example is that scientist have been added genes from animals to vegetables. Potatoes has been modified to resist herbicide, and this resistance can create a superweed; this is considered a danger for the environment.*

This is my argument.

Jessica had clearly written an outline, and had five paragraphs that followed the format. However, she had very little to say as she recalled her writing experience. She tended to read the segments of her essay, and make short comments that did not seem to have a relationship to her learning, “*Besides, the development of GM foods also helps the tackle worldwide hunger which has been existing for decades. So I give different perspective of GM foods to the book*” (1.2).

Jessica, like Keith, did pay attention to the task requirements of paraphrasing. She read from her first proof and then commented on how she used the source:

*Recently, a genetically-engineered purple tomato is created in England which helps fight cancer and heart disease. Some disease-fighting antioxidant characteristics in berries are added to the tomatoes (2). Thus, GM products benefit consumers too.*

This number two is from my article. Basic stuff, I am not even quoting. I am reporting this development, this research. I think there are lots of opinions. I was rushing, so I just summarized. (1.2, 5.5)

Like Jessica, Eva was prepared for the writing session. Before beginning her recall, she mentioned her planning, “*Before I writing the article, I got an outline. So the first paragraph is based on the outline cause I have a hook and background and thesis. I did not change too much*” (4.1, 5.1). Eva then commenced to read her introduction and she subsequently reflected:

*As the food crisis is escalating dramatically, Genetically modified foods have been expected to be solution of food shortage by some countries. Simultaneously, if producing Genetically modified food only benefit farmers sparks hot debate.* (1)
Some people believe that to develop GM food which costs much money should be objected. However, even though the initial research of GM food is expensive, the achievement of biotechnology industry will bring great amounts of benefits to farmers, consumers and destitute people.

The number one is a paraphrase from the listening file. It provides information on the cost of too much money of GM food. I don’t know if this is parallel. I don’t know how to identify the destitute or the people in impoverished area. I want to make it as parallel. I am trying to do. This is my thesis. But my third body paragraph is talking about the benefit for people in the third world countries. I’m not sure how to include this information in thesis (1.2, 3.2, 4.1, 5.1)

Eva had actively sourced information to expand the ideas in her writing. She had paraphrased material from a magazine, the listening file, the course text, and an academic article. As in the previous ECLs for the other assignments, Eva expressed concern about the clarity of her writing to the reader. This is exemplified in the following episode:

Second, malnutrition is also a serious problem in many countries. Many people have diseases caused by the lack of balance nutrition (5) some biotechnology institutions have developed a new type of rice more nutritious than the traditional rice. People in poverty area will not suffer from the inadequate nutrition.

This also from a magazine and uh… it’s a paraphrase. It is example. Yeah…it is a problem of the countries. The last sentence I was try to make it longer. People suffer from the reality of the nutritions as they have inadequate out of areas food. But I did not find a proper sentence to make it all together and I wanted to clear with the reader. (1.2, 5.1, 5.5).

In conclusion, the data revealed that the challenge for most of the focal students was not the structure of the argument essay as that had been effectively modelled and outlined by Sophia. Accordingly, Keith used clever strategies of writing in the margin to note each paragraph’s function, Eva had a clear outline, and Jessica had a clear structure. Armando continued his struggle with format, while Rehan had missed the preceding lessons and, consequently, had not followed format. Developing content was the challenge for the students, as it required being informed by multiple readings. Synthesising the readings required knowledge transforming strategies (Bereiter & Scardamalia, 1987) in order to critically choose ideas from readings and transform the knowledge, synthesise ideas and add their own opinions.
Summary of Findings

This section summarizes the findings, and a short discussion follows. Table 25 reveals the total number of ECLs from the five stimulated recall sessions. The table also shows the total number of learning strategies demonstrated during the sessions. The relationship between the number of episodes and the frequency of behaviours may be an indication of the complexity and difficulty of a task. The first draft of the contrast essay involved writing a thesis statement with two parallel points and focused on a topic that was new for many of the students. This essay had the highest number of ECLs (52) that incorporated 79 learning strategies.

In the contrast assignment, students were still not accustomed to timed writing, and they had many components to implement into the assignment in the hour and a half for the assignment: ideas from the readings, the essay structure, the vocabulary and, if there was time, editing. Nation (2009) posited that the timed writing may improve fluency and develop writing expertise; however, the stimulated recalls revealed that the focal students spent much of their time deliberating content Ideas and Information, (1.1 and 1.2 activating previous knowledge and reading for content), creating introductions with a thesis statement Discourse: Language above the Single Clause, (4.1 structure and thesis) and using appropriate vocabulary Language below Sentence Level, (2.2 and 2.3 collocations, synonyms and academic words use), all of which had been the teaching focus of the week. Eva, Vladimir and Keith struggled with vocabulary, Armando found the structure to be a challenge, and all of the students except Rehan, commented on the difficulty of generating ideas on the topic.
The paraphrase assignment was also identified as challenging by the participants. The data revealed 48 ECLs with 96 strategies. The thought processes engaged in paraphrasing require more than just comprehending a text but also require a number of skills such as planning, revising, and editing (Campbell, 1990). Hirvela and Du (2013) liken paraphrasing to the knowledge telling and the knowledge transforming construct of Bereiter and Scardamalia (1987), whereby paraphrasing is considered knowledge telling because it requires a reformulation of the original text. Knowledge transforming occurs when learners have to apply skills to a larger context such as synthesising content from various readings. As learners read a variety of articles on a topic, challenges arise from the synthesis of the materials into a paper, and this requires more cognitive effort and processing. This likely explains the 48 ECLs and 83 strategies that occurred in the stimulated recalls for the argument essay. Sophia had explicitly taught and modelled effective paraphrasing strategies that included more than changing vocabulary by using synonyms. In her study, Keck (2010) found that paraphrases were more effectively accomplished when students also focused on creative revision of clauses and new wording, while original meaning was maintained. Yamada (2003) found that effectively summarizing and paraphrasing involves inferential thinking of choosing the text to paraphrase or summarize, and then combining this with the writer’s own ideas. Yamada called this academic literacy and being able to do this distinguishes a novice from an expert writer. Overall, paraphrasing is known to be
challenging for ELLs (Campbell, 1990; Keck, 2006, Shi 2004). The number of ECLs in both the paraphrasing and the argument tasks may be an indication of the focal students’ challenges with paraphrasing and synthesising content.

It is not surprising that the number of ECLs decreased in the second draft of the contrast essay. Students had had significant practice with the vocabulary. The ECLs were from the addition of the extra paragraph and the new thesis statement, which required the addition of new ideas. The number of ECLs was fewer when summarizing than when paraphrasing, and students identified the summary as an easier task than the paraphrase. Sophia’s scaffolded vocabulary teaching may have initiated a deep, elaborate processing (Hulstijn, 2001) of the vocabulary. This repeated exposure to the vocabulary as well as the opportunity to practice it repeatedly in paraphrasing may have helped to make retrieval easier so that students perceived that the words could be used effectively in both assignments. Furthermore, as Hirvela (2004) pointed out summarizing means reading the text for the main ideas and not including the specific details, which contrasts with the difficulty of the paraphrase assignment where a passage had to be completely paraphrased to include all ideas.

Table 26 summarizes each focal student’s ECLs according to each assignment. In other words, an ECL occurred when a student read part of their work and then paused to make a comment relevant to the task. Within one ECL various strategies could occur. First drafts of assignments generally had the greater number of ECLs than second drafts. It should be noted that in the stimulated recalls, when the focal students read their essays, some read longer segments than others before recalling the process, which may account for some of the variation in the data. Furthermore, some students did not write as much in an assignment as others.
Table 26
*Summary of ECLs by Task for each Focal Student*

<table>
<thead>
<tr>
<th>Student</th>
<th>Contrast 1</th>
<th>Contrast 2</th>
<th>Paraphrase</th>
<th>Summary</th>
<th>Argument</th>
<th>Total</th>
<th>% of behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehan</td>
<td>17</td>
<td>3</td>
<td>24</td>
<td>8</td>
<td>12</td>
<td>64</td>
<td>18.3</td>
</tr>
<tr>
<td>Armando</td>
<td>12</td>
<td>3</td>
<td>6</td>
<td>Absent 0</td>
<td>10</td>
<td>31</td>
<td>8.9</td>
</tr>
<tr>
<td>Vladimir</td>
<td>14</td>
<td>17</td>
<td>18</td>
<td>8</td>
<td>Absent 0</td>
<td>57</td>
<td>16.3</td>
</tr>
<tr>
<td>Jessica</td>
<td>Absent 0</td>
<td>7</td>
<td>16</td>
<td>10</td>
<td>16</td>
<td>49</td>
<td>14</td>
</tr>
<tr>
<td>Eva</td>
<td>13</td>
<td>7</td>
<td>21</td>
<td>13</td>
<td>27</td>
<td>81</td>
<td>23.1</td>
</tr>
<tr>
<td>Keith</td>
<td>23</td>
<td>7</td>
<td>11</td>
<td>9</td>
<td>18</td>
<td>68</td>
<td>19.4</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>44</td>
<td>96</td>
<td>48</td>
<td>83</td>
<td>350</td>
<td>100</td>
</tr>
</tbody>
</table>

Of interest is the overall distribution of the 350 ECLs. Armando had the least number of ECLs (8.9%). Despite his age and accumulated world knowledge, which could have been an advantage for him, he was undermined by his struggles with essay format, timed writing and content development. Many of his difficulties stemmed from the length of time since he had attended school, and he may not have been accustomed to the activities or the strategies needed for learning. This suggests that Armando’s continual references to being frustrated and confused had created a high affective filter (Krashen, 1977). Accordingly, cognitively engaging in writing tasks and reflecting upon the process became difficult for him. Rehan, Eva and Keith had the highest percentage of ECLs (18.3%, 23.1% and 19.4% respectively), while Vladimir and Jessica had 16.3% and 14% of the total ECLs respectively. They both had missed assignments, which may account for the lower percentage.

Figure 24 shows the total distribution of ECLs by student according to the *Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning* through the 6 weeks of stimulated recalls. Generally, *Regulation of Reading and Writing Task Processing* was the highest category for most students due to the emphasis on paraphrasing skills. Students generally paid attention to *Discourse: Language above the Single Clause* with thesis statements and essay organization being the most frequently mentioned in the recalls. *Language below...*
Sentence Level: Vocabulary can be related to Sophia’s explicit teaching of collocations and synonyms. Interestingly, students paid less attention to sentence structure and other grammar, which may relate to attention being paid to vocabulary rather than grammar (Porte, 1997).

Figure 24. Total distribution of ECLs across the Taxonomy of Teaching and Learning Strategies

As the data show, on an individual basis, Eva was continually cognitively engaged across all categories. She always came to class prepared to write; thus, her consistent strategy use may be a result of this cognitive engagement and being aware of what she had learned and how to apply it. This, too, may relate to her short time in Canada and desire to improve. However, Keith had been in Canada since elementary school, and he too demonstrated an awareness of learning and strategies, and he was keen to rationalize his learning process.

Rehan enjoyed talking about his abilities and being an upper year student. Even though he had a high number of ECLs, they at times related to content or vocabulary rather than the process of writing. Interestingly, even though his ECLs frequently referred to paraphrasing, he was the one student that was patchwriting. In her ECLs, Jessica tended to speak about content
rather than the process despite her apparent preparedness for writing. Furthermore, her shyness may explain her frequency of episodes. Vladimir was analytical and frequently questioned himself and what he intended as he wrote. His episodes revealed a cognitive awareness of his learning and his challenges. Finally, Armando’s ECLs focused on content or essay organization but often were expressions of frustration or uncertainty of how to approach a topic or a genre. When his episodes related to vocabulary, he often seemed confident about his word choices. In the paraphrasing tasks, he had a fewer number of episodes than the other focal students, perhaps because he was uncertain of the requirement of the tasks.

**Perceptions of Learning: Survey and Interview data**

The findings in this section seek to answer the last sub-question. In what ways do the students perceive reading-to-write cognitive strategies as being helpful when engaged in these tasks? The findings are taken from a single class survey and from semi-structured interviews with the focal students.

**The final survey**

The two part final survey was administered on the last day of the course (See Appendix K) to 22 students (including the focal students). The first part of the survey asked what classroom activities had been helpful when engaging in reading and writing activities. The activities listed were based upon the observed teaching activities during the course. Some of the activities such as vocabulary building, practicing parallel structure, having discussions, practicing paraphrasing had been explicitly taught, while others such as writing outlines and making margin notes were certainly mentioned in the class but were rarely taught as strategies. The category of receiving feedback on drafts was mentioned on the survey since it was an important part of student
learning in the multi drafting, whereby Sophia guided students to their error types. The types of errors were frequently incorporated into the instruction.

Table 27 shows the survey results. Students generally found all the class activities really helpful or somewhat helpful with the exception of listening to sound files, which may be because students may not have considered it necessary to listen to them, as homework was frequently not completed. Parallel structure, specific grammar points, editing strategies and receiving feedback on writing were the most valued activities, while vocabulary building, paraphrasing and summarizing were ranked the next most valued. These were all activities that Sophia had explicitly taught.

Table 27
Final Class Survey Data

<table>
<thead>
<tr>
<th>Type of classroom activity</th>
<th>Really helped me a lot</th>
<th>Helped me some of the time</th>
<th>Didn’t help me much</th>
<th>Didn’t help me at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using vocabulary building strategies such as learning the collocations in the readings to help you when you wrote</td>
<td>8</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practicing parallel structure</td>
<td>12</td>
<td>9</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Planning ahead or creating writing outlines for essays</td>
<td>7</td>
<td>12</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Having class discussions about the reading topics</td>
<td>6</td>
<td>13</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Making margin notes about the readings</td>
<td>7</td>
<td>11</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Synthesising material from different readings in order to write essays</td>
<td>8</td>
<td>13</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Talking about the importance of editing strategies</td>
<td>10</td>
<td>10</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Practising paraphrasing activities</td>
<td>8</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practising summarizing activities</td>
<td>9</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getting teacher feedback on your writing from draft one to draft two</td>
<td>18</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening to the sound files and taking notes</td>
<td>4</td>
<td>11</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Learning specific grammar points such as articles, modals, and the passive</td>
<td>15</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Survey: Student perceptions of learning

The survey had a number of open-ended questions that related to students’ perceptions of learning and strategy use in order to fully answer the sub-research question. It was important to understand how classroom activities related to student learning and strategies they used. Students reflected on the classroom activities (See Table 26) in order to determine which activities they believed to be the most important to their learning.

Accordingly, students identified many of the activities that Sophia had focused on. One such activity was parallel structure. Four students identified this as a main learning activity. Other students identified vocabulary, academic word use, paraphrasing and summarising as the most important, which was also explicitly modelled. A few students identified organizing writing as being the most helpful. This may have been a personal preference, as Sophia had not focused many strategies on outlining or organizing. Some students identified the teacher feedback as being helpful for editing. Teacher feedback if given on student work or written as board work can be deemed a teaching episode, and Chapter 5 described ESEs and ECMs where Sophia used student-generated sentences as teaching tools. However, any written feedback on assignments was not an observable behaviour. While that feedback was likely invaluable to students, it cannot be analysed in this study.

One question focused specifically on students’ perceptions of writing strategies and their use. Analysis of the student responses found six important categories: building vocabulary, paraphrasing, outlining, improving grammar, developing content, and understanding genre. See Table 28 for a summary of the student responses. The focal teaching points of vocabulary, paraphrasing, and grammar strategies continued to be the main perceptions of learning. Interestingly, it was found that 5 students identified outlining as the most useful strategy. However, Sophia had modelled an outline in just one session close the end of term in order to
show the complex structure of an argument essay. Sophia’s rationale for this was that students should already understand how to outline an essay and that generally the strategy did not need to be taught. Sophia made an exception and modelled an outline of an argument essay. Not only was the argument essay the final assignment, but it also was the genre for the final exam. Accordingly, students may have considered outlining an important strategy given the importance of the final task to which it could be applied.

Unlike the rich perceptions of the importance of writing strategies, responses about useful reading strategies were limited. Sophia had not viewed the development of reading strategies, other than paraphrasing, summarising and vocabulary, as an important teaching focus in this course in part because she felt that she had insufficient time to specifically teach strategies such as skimming, scanning, or inferencing and looking for bias. Furthermore, Sophia believed that students should already have mastered these skills either in high school or in their own countries.

Table 28
Survey Responses about Useful Writing Strategies

<table>
<thead>
<tr>
<th>Building vocabulary</th>
<th>Paraphrasing</th>
<th>Outlining</th>
<th>Improving grammar</th>
<th>Developing content</th>
<th>Understanding genre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choosing more academic words in order to write more academic essay</td>
<td>Paraphrasing quotes from others.</td>
<td>Writing an outline, really cut down the time to think what I want to write about and focus on other issues in my writing</td>
<td>To get low error average</td>
<td>How to improve content</td>
<td>Classifying different patterns of essays</td>
</tr>
<tr>
<td>Using new vocabulary with parallel structure</td>
<td>Paraphrasing is the most useful strategies as it makes the writing more interesting and have more variety</td>
<td>The outline. Put out an outline can make it certain that what you are going to write, your direction</td>
<td>Sentence structure because it is the base</td>
<td>Structure of the essay is important with good content.</td>
<td>Argument essay. I believe I will be using them a lot in my future years.</td>
</tr>
</tbody>
</table>
Each chapter of the course textbook (Williams, 2005) had warm-up vocabulary activities and had reading strategy activities incorporated such as using margin notes to answer comprehension questions (pp. 56-57). The chapter on alternative medicines had note-taking charts to be shared in groups in a jigsaw activity (p. 98, p.99, p.101, p.104, p.105). The readings in the chapter on genetically modified foods had some focus on predicting bias (p.180). Consequently, Sophia assigned these readings as homework and told students to complete them and the relevant activities. In the survey, some students commented by just saying ‘yes’ to reading strategies with no explanation. Four students responded that vocabulary strategies were helpful in reading. Other students identified summarizing, paraphrasing and, interestingly, margin notes as useful strategies.

The connection between reading and writing is an important aspect of this reading-to-write study. As Hirvela (2004) noted expert writers need to be skilled readers with one skill
informing the other. Therefore, student perceptions of the relationship between the two skills are important to consider. The findings indicate that most students viewed a relationship between the two skills and the needed strategies. Eighteen students answered this question and 12 of them identified a similarity between reading and writing strategies. In Table 29 some of the responses explicitly draw a parallel between the skills. The findings show that some students identified reading as being helpful for improving writing skills by raising awareness of written structures. Others focused on the reading informing the content of the writing. These thoughtful answers can be considered a reflection of Sophia’s teaching which supports the reading-to-write literacy building dimensions and that reading informed writing.

Table 29
Student Perceptions of Reading Connecting to Writing

<table>
<thead>
<tr>
<th>What about writing? Do you think the reading strategies you use are similar to the ones you use in writing? Why or why not?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes. Reading and writing are connected.</td>
</tr>
<tr>
<td>The more I understand an article, the more clear I write an essay</td>
</tr>
<tr>
<td>Yes, I use plenty of content from my reading and use it in my writing</td>
</tr>
<tr>
<td>Writing is almost the same as reading. You need to learn things from reading, then you have the ability to write</td>
</tr>
<tr>
<td>Yes, start by brainstorming the main ideas in the reading and then write</td>
</tr>
<tr>
<td>Yes. Before writing, I have to do relevant reading to gather info</td>
</tr>
<tr>
<td>They are similar because I can improve my writing skill while am reading</td>
</tr>
<tr>
<td>Yea. Make some highlights or mark key points on the reading are easy to refresh and continue writing</td>
</tr>
<tr>
<td>Somehow they are connected coz they make me write better</td>
</tr>
<tr>
<td>Writing is similar to reading. Writing just needs more of my thoughts about vocabulary and grammar</td>
</tr>
<tr>
<td>Reading is the process to accumulate someone's thoughts. Writing is the process when we express our thoughts with the reading thoughts</td>
</tr>
</tbody>
</table>
Focal Student Perceptions of Learning

The focal students had a short semi-structured interview at the end of the semester in order to gauge their perceptions of learning and what strategies had been most useful. The following summarizes their reflections.

Students were asked to comment on their writing process and if they thought it had changed over the semester. The findings indicate various areas of perceived improvement. Rehan and Keith both believed that their writing speed and level of fluency had. Vladimir commented, “Now I am very interested in writing...it was much easier because you involved in the process of writing...I think this course give me a lot. It give me to express my thoughts easier and how the structure should it be. It was very helpful.” Jessica felt that she had improved awareness of errors while writing as had Eva, who also felt her understanding of essay structure had developed. However, Armando, never having had previous formal English instruction, commented, “Yes well this course made me more conscious of my weaknesses. My weaknesses are English grammar.” Overall, the findings indicate that students felt an improved sense of awareness of their writing and the process it entails.

The findings from the interviews indicate the focal students’ perceptions of the in-class activities are similar to those of the entire class. Perceptions focused on vocabulary building, creating outlines, paraphrasing, and editing grammar with synthesising materials and having class discussions as other areas of focus. The findings are described according to the main themes.

**Building vocabulary**

All focal students commented on the usefulness of learning vocabulary. Rehan knew much of the vocabulary because of his connection to science; however, he indicated that the lists on the board were very useful. Sophia. Jessica and Keith believed that the in-class vocabulary
activities that used grammar and vocabulary together had been very useful for writing their assignments. Vladimir was keen to expand vocabulary and found the practice of vocabulary from readings to be “the most important thing.” Eva’s perception was that Sophia had taught her to use academic vocabulary, and that the vocabulary from the readings was language that Sophia “had given me to use.” Armando found the learning collocations especially important. “It was really helpful because some words had to go together; otherwise, they would not make sense for the reader or listener.” These findings point to the need for explicit vocabulary teaching and mining of the text (Hirvela, 2004).

Creating outlines

Sophia had little teaching focus on outlines other than modelling for the final argument essay. The findings indicate that the focal student beliefs varied in the usefulness of writing outlines. Vladimir found creating outlines very helpful, and he referred to when Sophia had modelled as a picture frame or a big block. “It is a good strategy to think how your writing will be in the beginning...In this case by building the writing from the small blocks like Sophia showed us, can lead you to a variety of thoughts. I mean the train of thoughts will be right because you predict how it will be.” However, Keith thought that outlines were not useful since he found “It is pointless because your ideas change during your writing step.” Eva, Jessica and Rehan shared similar views about outlining and felt they were useful just for general ideas but not to plan details. Armando indicated he had realised outlining was helpful especially once Sophia had spent time with him explaining the purpose of the outline.

Having class discussions

The findings indicate that most focal students perceived the significant time Sophia had spent discussing content either in groups or by eliciting ideas from the students as helpful and informative to their writing. Rehan was the exception, as he had not prepared for tasks by doing
the readings. “Honestly in the beginning, I did not read the textbook. They discussed, and I did not read.” As a result, Rehan had not always been on topic when writing. He admitted that by the end of the course he had realised the importance of reading the assigned material for essay content. Keith and Vladimir found discussing content had really informed their writing. “Yeah, like I said it get the ideas going. If you just thinking by yourself you don’t get idea, but if you in a group, you get ideas. It is like collective ideas” (Keith) and “It at least extend my vision on the problem. It is very helpful” (Vladimir). Jessica believed that discussing content helped her know what to include in her essay and what to exclude. Eva had enjoyed the group discussions and found them useful when she struggled for ideas, “When I write, I just can’t think. I just remember when we talking about this idea, then my remembers can help me. I know some examples or details about this idea.” Armando, however, felt that discussions were not helpful, as he would have preferred to talk about learning English and to focus on grammar.

**Synthesising readings**

Students were required to synthesise ideas from three or four readings for their essays. This is an important aspect of academic writing, and it was found that all the students perceived this as a useful yet difficult task. Vladimir thought it helped him “see how professionals think about the topic and then put ideas together.” Keith likened synthesis to a form of brainstorming to give him new ideas. All the other students commented that it was helpful to add ideas to their readings, but that at times it was challenging to integrate the ideas into the essay. As Eva commented about looking for content and integrating it into her writing, “Yeah, is useful but don’t know if it’s good or bad informations.” These findings confirm the challenges students face with synthesising readings into writings and that some explicit instruction may have reduced some of the challenge.
Paraphrasing

Much of the instructional focus had been on paraphrasing skills. Table 30 shows that all of the focal students felt that paraphrasing had been important to their learning. They all perceived the strategies for paraphrasing as useful in other courses. Interestingly, Armando, despite his struggles with essay format, perceived paraphrasing to be easy, and that may have been due to the strength of his vocabulary.

Table 30
Focal Student Interview: Perceptions of Paraphrasing

<table>
<thead>
<tr>
<th>Student</th>
<th>Perceptions of paraphrasing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehan</td>
<td>I knew paraphrasing. I am used to writing science labs. Actually I was doing some of it but I did not know what it was called. So now I know how to change the sentence structure, change the key words and therefore the sentence is changed. I was doing something like that, but I did not know the word.</td>
</tr>
<tr>
<td>Vladimir</td>
<td>It was really good. We made lots of practice in class. I like how Sophia showed the good and bad ones. I know synonyms are important and that is really good in a paraphrase.</td>
</tr>
<tr>
<td>Keith</td>
<td>It was actually quite good. So basically when I was doing an essay outside of this class, it helps. It really helps a lot.</td>
</tr>
<tr>
<td>Jessica</td>
<td>I think it’s a very helpful practice but I think I am weak at it. I can’t step away and read things. I have a first impression of a sentence and I try to copy. The class really helped me.</td>
</tr>
<tr>
<td>Eva</td>
<td>It is a challenge for me. It can test your vocabularies and your sentence structure. It is a necessary skills...Yeah the practice is useful in the future.</td>
</tr>
<tr>
<td>Armando</td>
<td>It is easier for me. You say something in one way and then I can say it another way. I can paraphrase you easy. If I understand the concept, I can convert your concept into my own words. I can do it other courses.</td>
</tr>
</tbody>
</table>

Learning about and editing grammar

For each writing task students received feedback on their writing not only for organization and content, but also for errors where errors were calculated as an error average (the number of errors for every 100 words). Reducing the density of errors increased student grades. In the semi-structured interview, the focal students commented that teacher feedback on
assignments was very important to their learning. In some of the stimulated recalls, students referred to Sophia’s feedback on improvements. Interesting, Sophia had neither modelled nor shown how to best use her feedback to improve writing as class activity. However, when second drafts were written, she moved around the room and counselled students individually on their organization but not explicitly on how to resolve a grammar error, as the expectation was for students to seek the answer through course notes, a dictionary or the course text.

The findings indicate that students were concerned about improving grammar and wanted to improve editing strategies. Most believed they had benefited from the explicit teaching and practices. Rehan was the exception as he claimed to have poor grammar and admitted it had not improved because he had missed many classes during the term. Keith perceived editing as important yet difficult because he found it difficult to find his errors and sometimes would not bother trying. “I don’t do it. If I read over and over again I don’t see the mistakes.” Sophia had constantly reminded students to “look back down the sentence” in order to see errors. She reminded them to be strategic thinkers and to anticipate errors. Most focal students found this a worthwhile cognitive strategy. Indeed, as Vladimir suggests, “I have to know from my understanding to know what to do. Now I know what kind of problem I have, now I can put my attention on the rules. I can look back and figure it out”. Similarly, Armando states, “I found that very good in the course, it made me understand”. While Jessica says “It helped cause sometimes some classmates make a mistake and Sophia will explain why and correct...I just have more um memory of that...then, I try talking to myself inside my head”. Eva commented that she had learned all the grammar before the course but believed the teaching had strengthened her knowledge and given her ways to edit even though at times she was frustrated by her errors. This may be an indication that Vladimir, Armando, Jessica and Eva may have been cognitively
engaged in using editing strategies. This may have been a result of Sophia’s explicit teaching of how to edit, especially through the use of student-generated work on the board.

**Perceptions of learning**

From this highly explicit teaching, it is important to understand what the focal students perceived as enduring challenges, and what they thought they would carry forward, and how they perceived the connection between the teaching and their learning. Most of the focal students identified a lack of vocabulary as challenging when writing, other than Rehan who identified overly long sentences as his main challenge. Armando commented that all writing was difficult for him, yet he felt that the format of the essay, as he best understood it, would benefit him in other courses. Jessica, Keith and Eva perceived paraphrasing as being useful in their other courses. Vladimir’s comment, “For me it is valuable that I have every week practice in writing and strategies to help. From this course, for me I wrote every week on different topics. It was practice, and I really appreciate this practice. I need to keep practicing the strategies” was important as it demonstrated his appreciation of the scaffolded practice from Sophia’s teaching.

Overall the students believed that Sophia’s teaching activities facilitated their learning. Kevin commented, “The way she teaches more interactive. This is like a system that I like, so overall, yeah. I like interactive activities, going to the board, brainstorming instead of working by yourself.” Eva commented similarly, “I think the most of the group things Sophia do in the class helped me strengthen the grammar and my writing.” Rachel felt that Sophia created a risk-free learning situation where the affective filter was low and the scaffolding enhanced learning: “Maybe it’s a bit abstract but her attitude, she’s very approachable, and I don’t mind making silly mistakes. I like the practice. I am not afraid of asking her simple questions and that really helped. I truly know what my weakness is and then fix it.” Even Armando, who had struggled, commented, “Oh yes Sophia is very helpful in this. She was very clear in teaching.” Armando
recognised that Sophia’s integration of the skills and the grammar was good teaching; however, he acknowledged that at times it confused him. “What I found was she put so many things together in one box. Was really good for the rest of the class. They like, but at some moment, I did not know where the box was going.” It should be remembered that Armando was back in a formal learning environment after over 40 years. In contrast, Vladimir felt that Sophia’s teaching raised learning to new levels:

First of all, being in classes was great. She interest me in studying process. She did it so emotionally. I mean those poems, that helmet. It wasn’t just a regular studying process, it was something else. So I feel then contact between us and Sophia, it is not just teacher and student. It was a more personal level, and it helped me learn.

In summary, both Chapter 5 and this chapter have revealed much rich data from Sophia’s teaching episodes and from the students’ stimulated recalls. Both chapters were themed according to the data analysis and the overlap of themes is evident, for example, vocabulary, gathering ideas, sentence structure, and paraphrasing. The two data sets converge thematically with the students’ frequent references either directly to Sophia’s teaching such as the presentation of specific vocabulary or their allusion to Sophia’s reminder to be informed by readings.
CHAPTER 7
DISCUSSION: TEACHING AND LEARNING – THE CONNECTIONS

In this chapter, I discuss the findings of the study and the related implications in order to answer the overarching research question: How does the teaching of metacognition in an EAP reading and writing course at a Canadian university occur and then relate to perceptions of students’ performance in writing tasks for the course?

The following section discusses the findings within the relevant scholarly literature and the conceptual framework employed in this study.

Connecting Teaching and Learning

The findings for the main research question indicate that the teacher and the students perceive a connection between teaching cognitive strategies and learning. The teaching situations where Sophia had the highest number of ESE and ECMs were reflected in the ECLs of the focal students’ stimulated recalls. In some instances, focal students referred specifically to Sophia or the specific classroom activities when recalling the writing process.

The findings indicate that the focus of teaching changed during the course in order to provide the needed scaffolding and build each area of expertise before teaching another concept, yet at the same time continually referred back to previous teaching points. Scaffolding focused explicitly on the development of writing skills through the reading content. In this course students activated what they had learned in multiple ways through vocabulary, grammar, discussion and writing. It is this scaffolded practice that provides explanations for students’ improvement. Schwieter (2010) also found that students improved with scaffolding or what he called “assisted learning,” and suggested what students learn about one form of writing carries over to the next. Accordingly, Sophia first concentrated on the need to develop content, which
was reflected in the students’ stimulated recalls. In conjunction with content, essay format was very important along with vocabulary development. As Sophia progressed through the course, she continued to focus on vocabulary, but included sentence variety and passive voice so that students had the essential tools required for effective paraphrasing. The course culminated with a task that required students to synthesise articles and write an argumentative essay. Furthermore, Sophia’s continual scaffolding and use of familiar content and vocabulary is consistent with Vygotsky’s (1978) theory that posits that learning takes place through mediated learning in the student’s Zone of Proximal Development (ZPD).

Sophia could be considered an expert teacher suggesting that she understood the needs of the students and the importance of the curriculum. She had vast pedagogical knowledge and was able to skillfully model concepts in an expert manner. In his research of teachers’ conceptualization of their pedagogical practices, Cumming (2003) found commonalities in teachers’ beliefs in the necessity of understanding the writing process, and that novice teachers must develop these skills. Similar to Sophia, the teachers in Cummins’ study were universally aware of student achievement. Sophia was bound by her curriculum, the course text and the choice of topic. Cumming found that while teachers had commonalities in their instructional approaches, the curriculum determined the type of writing and form of assessment.

The findings indicate a connection between the teacher’s cognitive episodes and those of the learners. Table 31 shows the distribution of cognitive episodes for both teaching and learning across the broad learning and teaching categories. As can be seen, the episodes of explicit teaching proportionately converge with the students’ stimulated recalls in the categories of Ideas and Information, Vocabulary, Discourse (includes thesis statements and essay format), and regulation (includes paraphrasing) (See Table 3 for the full list of categories of the Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning).
Table 31
*Frequency of Teacher and Focal Student Cognitive Episodes Compared*

<table>
<thead>
<tr>
<th>Category</th>
<th>Teacher (ERA, ESE, ECM)</th>
<th>Focal students (ECL)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contrast</td>
<td>Paraphrase</td>
</tr>
<tr>
<td>Ideas</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Sentence grammar</td>
<td>28</td>
<td>26</td>
</tr>
<tr>
<td>Discourse</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Regulation</td>
<td>9</td>
<td>22</td>
</tr>
</tbody>
</table>

However, in the sentence grammar category, the number of episodes (ERA, ESE, and ECM) during the teaching of the compare and contrast essay is greater than the number of learning behaviours (ECLs), while in the paraphrasing assignment the proportion of ECLs is similar. This may be explained by the fact that Sophia began to teach sentence variety and parallel structure for the contrast essay, yet it was her continued emphasis and scaffolded practice of sentence variety as preparation for paraphrasing that may have had an impact on student writing in the paraphrasing task. Therefore, students were likely more cognitively engaged in thinking about sentence structure when paraphrasing than they were in the contrast task where they more likely focused on content and vocabulary.

In the next sections, the findings of the specific areas of teaching and learning are discussed in relation to previous research in order to answer the main research question.

**Being informed**

The findings indicate that both Sophia and the students considered the relationship between reading and writing to be symbiotic. Carson (1993) describes reading and writing as having shared knowledge and a shared process in that both are transactional in nature. Being informed in order to write is critical; in fact, ‘be informed’ was almost a mantra in Sophia’s
classroom. Sophia’s discussions and content development were what Hirvela (2004) considers ‘mining’ the texts, and Craig (2013) would call this a ‘writing-to-learn’ activity that is coupled with class discussions. Craig determined that student ‘exploration’ of the topic is essential, even in the case of short essays. Most of the focal students reported that they found the discussions helpful and referred to the importance of reading.

**Vocabulary development**

These findings suggest that vocabulary development is integral to fluency, as learners frequently perceive this to be their weakest skill, and as research suggests, being able to use appropriate academic vocabulary is a challenge (Heeney, 2005; Hyland & Hamp-Lyons, 2002). Many students in this study identified vocabulary as a weakness and a skill they wanted to improve. The findings indicate that students were engaged with the vocabulary that was explicitly taught from the readings and integrated into grammar lessons. With repeated practice, many of the students were able to use the vocabulary appropriately in their writing. This concurs with Hulstijn’s (2001) rich, deep information processing or elaboration, and the ways in which the deliberate rehearsal and practice of the information is an important pedagogical practice. Huckin and Cody (1999) suggest that multiple exposures to a word will increase the probability of retention; Nation (1990) concluded that 5 to 16 exposures are needed for acquisition. The focal students’ stimulated recalls is consistent with Paribakht and Wesche’s (1999) think-aloud protocols that determined that vocabulary acquisition was not incidental but rather occurred through explicit exposure to the words. Thus, these findings suggest that Sophia’s highly directed and explicit vocabulary teaching was effective.
Developing sentence variety and reducing errors

As previously mentioned, the focal students, in their think-alouds expressed concern about vocabulary use. Sophia also focused specifically on vocabulary development in order to help build content. As the course progressed, Sophia focused on sentence structures, and the students seemed to transition to thinking about errors. Sophia had commented in her final interview that teaching specific strategies of how to ‘look down the sentence’ and analyse for errors had resulted in fewer errors, but these strategies had taken time for the students to develop. This points to Verspoor, Schmid and Xu’s (2012) position that language learning and writing is developmental. Beginner writers use simple sentences and focus primarily on vocabulary; then, they move to more complex construction and lexical items. The students in this study were not beginners; however, they still began the course by focusing on vocabulary and not on their errors. The researchers stated that “more proficient writers use some new constructions (e.g. more advanced vocabulary and chunks), but they especially rely more and more on the more complex constructions that they already used previously, and as proficiency increases, they make fewer errors” (p. 258). The authors noted that advanced learners are likely to continue to produce errors, especially when they learn something new and experiment with the new structure. Keith and Eva were able to produce the required essays and were aware of their errors, yet they expressed frustration that they still made them.

Developing the writing from ideas to essays

The findings show that Sophia’s approach was thematic in all aspects of the writing process. Time spent on essay format and genre, thesis statement development, and any pertinent grammar was always consistently undertaken within the themes from the readings. Certainly, Sophia was working from the Williams (2005) text; however, she cleverly integrated content into all teaching. She also incorporated a variety of texts, both literary and non-literary, into the
course themes. Students read newspaper articles and listened to sound files. Hirvela (2001) pointed out that a variety of source texts are important in EAP classes not only to stimulate students’ interests, but to also provide students with opportunities to respond to various types of sources.

This thematic approach created continuity in the course, as each theme including, branding, types of medicine, vaccinations and genetically modified food, was the focus for two weeks. The theme, the vocabulary and the essay format were expanded and linked each week so that students returned to familiar concepts. In particular, Sophia drew connections between the last three themes. Students became confident with the format, the vocabulary and the grammar so that when they wrote they were generally aware of what was needed in order to be successful in the task. These findings are consistent with Briton, Snow and Wesche’s (2003) beliefs in that this theme-based teaching creates a framework of consistency. Even though Briton, Snow and Wesche advocate a single theme so that students work from the same content, the manner through which Sophia wove together the themes was consistent with their belief that theme-based teaching enhances the connections between reading and writing.

**Paraphrasing skills**

Paraphrasing was an integral part of the course and the findings suggest that the extensive practice in not only vocabulary development, but also sentence variety attributed to the success of the task. Sophia considered paraphrasing to be more complex than moving or altering single words, as she focused on chunks of language. Her goal was for learners to have the skills to paraphrase and synthesise texts in other courses. This is consistent with Hirvela and Du (2013) in that teachers have to move to a rhetorical method of teaching paraphrasing. They suggest that writing teachers need to help learners “transition from knowledge telling to knowledge transforming, and not to assume that teaching word replacement and grammatical restructuring
strategies is all that that paraphrasing instruction is about” (p.97). Sophia had recognised that teaching paraphrasing is essentially teaching composing, which is consistent with Bereiter and Scardamalia’s (1987) knowledge telling construct, wherein synthesis and critical analysis of texts is a knowledge transforming process.

Synthesising texts is challenging as the findings indicate. Sophia speculated whether synthesis of texts is a teachable skill. Students agreed it is a valuable skill, yet they perceived it as challenging. Grabe and Zhang (2013) noted that misuse of source materials and patchwriting are the greatest problems, but that direct strategy training in synthesis, plus extensive practice can reduce these challenges and improve writing skill. Text synthesis is a complex cognitive task (Stein, 1990). Synthesis is driven not by the readings but by the writer’s text (Carson, 1993), and Sophia told students to be informed by their own ideas first. Spivey (1990) found that this means that the writer has to make choices about texts, consider prior knowledge and text organization as it may differ from what the writer is composing. As Eva pointed out, making choices about text is difficult, which concurs with Spivey in that intertextual connections are difficult for learners. Flower (1990) found that it is necessary for learners to be able to adjust so that the synthesised text matches the task and that weak writers will frequently struggle to make appropriate choices. Sophia had indicated that some of the students were unable to integrate more than one text, as synthesis likely had been a significant cognitive and linguistic challenge. It should also be noted that despite the difficulties students experienced, they may have been able to carry this skill forward to other courses. Hirvela (2011) suggested reading for information, understanding and writing summaries or notes allows the students to transform what they read into learning content – writing to learn.
Cognitive teaching and learning: “Uptake”

This study has shown how being a ‘think-aloud’ teacher mediates student learning. Sophia’s ESEs and ECMs were explicit and powerful to observe. By nature, she is an outward thinker, thus it is likely that this cognitive teaching comes naturally to her. Wilson and Bai (2010) described teachers as needing to be very self-aware and able to understand the needs of the learners. The findings also indicate Sophia’s teaching facilitated student learning. This suggests that students at least have cognitive awareness of what they need to pay attention to in their learning. This is consistent with Wenden’s (1998) beliefs that explicit teaching and demonstration may allow learners to regulate their learning. Accordingly, the focal students may have had heightened cognitive awareness during their stimulated recalls by identifying and describing specific elements in their writing. Swain (2006) described thinking-aloud as a continuation and strengthening of learning. Sophia’s explicit modelling and constant provision of rationale related to the ‘when, where and why’ of a strategies, combined with her approach of engaging the learners in the ‘how’ by performing the task, and evaluating success is consistent with Zhang’s (2008) principles and procedures in strategy instruction.

These findings are consistent with those of Negretti (2012) who found that in courses that scaffold instruction, students generally build not only their declarative and procedural knowledge of strategies, but also develop a heightened awareness of conditional knowledge of when to implement strategy use, which becomes unique for each learner in order to achieve their writing goals. In other words, students have an understanding of the nature of academic texts and are able to self-regulate and produce appropriate texts while evaluating their writing.

However, the findings indicate that the ‘uptake’ of the teaching was not consistent with all the focal students’ cognitive engagement. Not all students learn in the same way. Various factors such as motivation and learning style may affect student learning. Previously, Rehan and
Vladimir had been introduced as experienced university students, while Keith and Armando both struggled. Jessica and Eva were both determined to succeed and improve their English.

Valiente (2008) suggested, “A ‘high quality learner’ is normally defined as an individual with self-motivation for attaining and acting on knowledge, and who is able to expand this knowledge” (p.74). This is not to say that the focal students in this study were not high quality learners. All of the students were motivated; however, the level of motivation varied. Gardner (1985) suggested that a high level of motivation and a positive attitude could be related to successful language learning. All the students in the course were extrinsically motivated in that they had to pass the university English exam, while some (Vladimir, Jessica, Eva) were also intrinsically motivated as they experienced self-satisfaction in improving their English.

Despite his university experience, Rehan frequently missed classes. He held the belief that due to his being in third year, his writing skills were strong. However, Rehan was frequently off-task and unprepared as he had missed elements of essential teaching. Keith was motivated, yet he had difficulties with fossilized errors and frequently complained of writer’s block. His learning style was very kinaesthetic, and he was happiest while involved in group or board writing activities.

He lost focus at other times during lessons. Armando was motivated, yet struggled with being an older learner and returning to an academic environment after many years. Much research supports how individual differences, learning styles, motivation, environment and attitude affect learning and the possibility of learners being able to apply learning beyond the classroom environment (Csizer & Dörnyei, 2005, Dörnyei, 1994; Dörnyei, 2005; James, 2012; Oxford, 1990). Furthermore, it should be noted that Sophia’s think-aloud modelling provided one option of how to achieve a task as an expert. However, this may not be how other instructors would approach demonstration of the same task. This could depend on the learning style of the
instructor, which in turn may have an impact on students’ being able to transfer learning depending on the learners’ preferences.

Another consideration is that not all students may not have enjoyed the high energy, vocal, direct method of teaching Sophia employed. In this class, a number of students were Asian, and were keen to become part of the university community. The desire to belong can be described as students having an ‘integrative disposition’ (Dörnyei, 2003; Gardner, 1985). However, despite this desire, some of the students may not have adapted to Sophia’s teaching style given that it may have been different to a more teacher-centred style they may have experienced in their home countries. Valiente (2008) stated that the learning process in another culture is a form of conditioning for how learners perceive a preferred learning style. Learners coming from an educational background where norms include memorization, lack of collaboration and a passive approach to learning may have difficulty adapting. Valiente posited that learners are often unable to use this preferred learning style of rote memorization, for example, for learners are challenged by reading in L2 and often develop a new set of learning styles and preferences. Eva and Jessica both seemed uncertain of Sophia’s teaching style at the beginning of the course, yet they both adapted and began to enjoy the interactive environment.

Another point to consider is when modelling has a negative impact. Certainly, Sophia felt that when she modeled the argumentative essay, students had difficulty extending their ideas beyond the model and tended to ‘borrow’ ideas. However, Sophia’s choice to extensively model the argument was because the genre was new to most of the students. Macbeth (2010) points out the rigid conventions often demonstrated in ESL classrooms can constrain students’ thinking. However, she agrees that the novice writers can benefit from the modelled instruction, for often novice writers do not share the cultural knowledge of the community of practice in an academic environment. She also points out that modelled essays are only ‘skeletons’ as they are not well-
developed essays. In fact, such essays are frequently more similar to an extended outline. They often show ideas of how to develop support, but detailed are not extended with examples or appropriate cohesive devices. In her study, Macbeth held individual student conferences with each draft of an essay and tried to draw her students’ attention to the fact that the model is not a literal template for an essay that should be copied. Despite the benefits of conferencing with students, this may not have been viable for Sophia within the time constraints of a credit course.

Other considerations that may have had negative impact on learning include the fast pace of the class and the timed writing exercises. For some assignments, such as the contrast assignment, Sophia introduced the structure the morning of the assignment. For some students, and Armando in particular, this was not enough time to practice the organizational aspect; consequently, he became frustrated and his affective filter became a barrier. Sophia could have modelled example essays, which would reinforce the learning (Hirvela, 2004) despite the caution from Macbeth (2010) that students tend to depend on models. While Nation (2009) stated that timed writing could improve fluency, the focal students felt constrained by the time. Armando needed time to think and plan, while both Jessica and Eva commented that there was no time to edit for errors. Keith often had writer’s block and Vladimir needed time to generate ideas and vocabulary. Furthermore, while Sophia was trying to build skills in critical thinking, paraphrasing and synthesis, all of which are knowledge transforming (Bereiter & Scardamalia, 1987), the lack of time may not have allowed students to truly practice these skills. Expert writers need time to think critically and to transform material from readings as a paraphrase and to synthesise this with their own ideas.

Sophia’s assumptions of the students’ abilities may have had an impact on learning and carrying skills forward. She presumed that students had developed reading abilities and skill in planning for writing. Since the course had no pre-course testing measures, the skill level of the
students varied, as did their fluency level. Sophia stated in her interview that the course did not allow time for teaching reading strategies. Certainly, Sophia focused on vocabulary and discussing the ideas in the readings, which would help the weak reader. However, a criticism of the course is that these students were not offered additional help in reading or how to connect reading with writing. Accordingly it is unknown whether they would be able to apply these skills in future courses.

Another criticism of Sophia’s teaching is that she seemed to have a dependency on the strong students in the course to provide answers in her interactive ECMs, thereby not engaging the less fluent students. She often asked the stronger students to write sentences on the board as these students were generally motivated and completed homework. These students demonstrated understanding through their work written on the board. Accordingly, while this study provides evidence of learning among the focal students and some of the motivated students, it is unknown whether other students in the class were able apply what they had been taught in this course in other courses.

Finally, Sophia could have varied how she taught the strategies so that learners could see different options of how to problem solve a task. The study sought to examine Sophia’s declarative, procedural and conditional knowledge. Sophia demonstrated good procedural knowledge through how she taught strategies. However, in terms of declarative knowledge, there was little focus on reading strategies such as finding main ideas and using compensatory strategies, and in writing, there was little focus on genre, topic development and evaluating content. In part, the grammar content of the course prevented Sophia from introducing these strategies. In terms of conditional knowledge, Sophia was able to clearly demonstrate to students when to use strategies; however, at times, due to time constraints and the curriculum, there was not enough time for weak writers to practice before having to write an assignment.
Finally, despite the criticisms of the teaching, the findings suggest that there may be a connection between explicit teaching and the transfer to student learning. The stimulated recalls demonstrate ‘uptake’ as students applied some of Sophia’s strategies to their learning. These findings are consistent with those of Graham and Perrin’s (2007) meta-analysis of writing instruction intervention. Their recommendations are for instructors to teach a goal-oriented process approach to planning, revising and editing by providing models to analyse and to follow. Students need to be taught self-regulating strategies with a focus of instruction on summarizing readings, improving grammar, and writing increasingly complex sentences through combining sentences. Sophia focused on these same instructional elements with the multi-drafting approach to writing. Graham and Perrin also advocate collaborative planning and writing as a means to improve writing. While Sophia was able to engage learners in collaborative planning and discussion of readings and writing topics, students did not write assignments collaboratively because the assignments were graded individually.

The focal students vocalized their perceptions that their learning had improved as a result of the explicit teaching activities. Therefore, this study provides evidence that explicit teacher modelling influences student learning; however, certain aspects of teaching and learning variables affect learner ‘uptake’ or cognitive engagement. Cumming (2006) suggested many approaches teachers may apply to help learners achieve their academic writing goals, one of which is for instructors to model by thinking aloud and by giving explicit demonstrations.

**Revisiting the Framework of this Study**

This study is framed around the importance of cognitive modelling (Cumming, 1995) and its effect on student learning in a reading-to-write EAP classroom. Pressley et al. (2001) described exemplary teaching as opportunistic, similar to Hirvela (2004), who claimed that teachers take every opportunity to teach reading and writing strategies. Pressley and Afflerbach’s
(1995) meta-analysis of reading strategies formed the construct for reading, while Hayes (2012) and Bereiter and Scardamalia (1987), and Grabe and Kaplan (1996) formed the conceptual framework for writing strategies. These frameworks were synthesised, along with criteria from the classroom observations, to create a taxonomy of cognitive strategy activities both for teaching and learning that would fit within the reading-to-write EAP course.

The cognitive episodes of teaching were introduced from Zhang’s (2008) *Principles and Procedures in Strategy Instruction* (See Table 3). Zhang’s principles were a useful measure of cognitive modelling for the teaching rationale they provided (what, how, when, where and why of the strategy.) However, Zhang’s principles did not consider the importance or intensity of teacher talk as a think-aloud for the effectiveness of strategy training. In his study, much of the teacher rationale was to tell students about the importance of the strategy and how to use it, rather than including a highly directed think-aloud of how to use strategies to achieve a task while explicitly demonstrating it. This study found that cognitive teaching episodes varied in length, duration and the amount of explicit proceduralisation of ‘how’ to perform the task in the manner of an expert. Accordingly, three cognitive episode types were described: ERAs (raising awareness of strategies), ESEs (strategies explained and demonstrated) and ECMs (cognitive modelling of strategies with explicit think-alouds of how an expert does a task). Frequently, Sophia’s teacher talk included much explanation: declarative knowledge of what is learned, conditional knowledge of when it is used, and procedural knowledge of how it is used. Her episodes usually engaged learners socially though rhetorical questioning (Cumming, 1995; Roehler & Cantlon, 1997). Wilson and Bai (2007) determined that besides declarative knowledge and procedural knowledge, conditional knowledge is important as it demonstrates the flexibility of strategy use. The intense verbalization of ECMs and to some aspect ESEs may
increase student learning. This suggests that explicit modelling and think-alouds should be considered part of any strategy training model.

The *Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning* was a helpful tool for data analysis of strategic activities (See Table 3). The five criteria of *Ideas and Information, Language below Sentence Level (Vocabulary), Language below Sentence Level: (Sentence Grammar), Discourse: Language Use above the Clause* and *Regulation of Reading and Writing Processing* were very useful for identifying both teaching and learning behaviours. However, the taxonomy did not capture all the elements that this study revealed or, rather, that this study did not reveal. Accordingly, minor changes have been made to the taxonomy, which are described in the sections below.

**Vocabulary for writing**

In the original taxonomy, strategies for spelling and inferencing vocabulary meaning from context were not useful as Sophia and the students put little emphasis on these strategies. This might be a result of the class not focusing specifically on reading strategies; rather, the class focus was writing strategies with an emphasis on interconnecting the two skills. Sophia may have ignored the value of teaching vocabulary strategies as the course text (Williams, 2005) had sections in each chapter with strategies for collocations, context clues, and using suffixes and prefixes. Consequently, Sophia used the reading content and the language as the basis for writing assignments, without teaching the reading strategies. She was, however, ‘mining’ the text (Hirvela, 2004) for vocabulary and content ideas. In her final interview, Sophia had indicated that it was assumed that learners had developed reading skills, yet she regretted that she had not specifically modelled some of the vocabulary reading strategies. Nonetheless she was satisfied with her emphasis of teaching and practicing vocabulary from readings and related synonyms, as
she knew that students needed to build a bank of collocations and synonyms in order to write and to paraphrase.

**Grammar for writing**

Another important aspect of the course was the focus on grammar, which was a reflection of the course being a replacement credit of the English proficiency exam and its requirement for grammatical accuracy as well as good organization. Certainly, Sophia taught elements of discourse such as textual organization (the argument structure) and paragraph structure; however, the course focus often returned to grammar. She successfully modelled and explained these grammar points by using student-generated work. These grammar aspects are reflected in the taxonomy with parallel and sentence structure, and the passive voice being the most frequently taught, with other aspects receiving less focus. The other grammatical elements on the taxonomy did not have a specific focus in the course and could be combined into one grammar strategy.

**The value of assessing writing**

In the regulation category, Sophia tended to assess ideas and structure as an ongoing aspect of the cognitive process, similar to Hayes (2012). For example, if writing a thesis statement, Sophia modelled how students should assess the task success at the time of writing. This may have been because writing tasks were timed, and Sophia wanted students to assess form and structure as they wrote, knowing that they would not have time to edit at the end of the assignment. It should be noted that this thought may not be indicative of the true nature of composing whereby the writer needs time for reflection and revision or may change goals while writing (Grabe & Kaplan 1996).

**The desire for synthesis**

Sophia had indicated she would have liked to have time to teach strategies for synthesising a number of readings into a single writing assignment. Effective synthesis is very
important within the academic cognitive control as the reader synthesises readings with their own ideas and this becomes a knowledge transforming process (Bereiter & Scardamalia, 1987; Carson; 1993; Hirvela & Du, 2013). Thus, connecting ideas in readings to the writing task for synthesis in writing should be an aspect of the taxonomy included in future conceptualizations for teaching reading-to-write.

A new taxonomy of cognitive strategies
Based on the above reflections, the taxonomy can be adjusted to have better connections to the reading-to-write construct. This new taxonomy may better capture specific reading-to-write strategies that can be explicitly taught and practiced. Table 32 shows the revised taxonomy. However, this taxonomy may not capture the importance of teaching through student-generated work. Much of Sophia’s success came from using student-generated sentences to teach grammar, vocabulary, some elements of discourse such as thesis statements, and sometimes to mining texts to inform writing content.

As can be seen in Table 32, Language below Sentence Level (Vocabulary) now has only two categories that reflect the teaching. Language below Sentence Level (Sentence Grammar) has one combined category for all other grammar (3.4 Awareness of other grammar and punctuation), while keeping the categories of parallel structure, subordination and coordination, and passive voice. In Discourse: Language Use above the Single Clause paragraphing and cohesion were combined into one category based on how Sophia taught. In Regulation of Reading and Writing Task Processing (5.5 awareness of how to connect and assess ideas in readings for synthesis in writing tasks) is directed at the strategies for critically assessing ideas for text synthesis. It should be noted that this taxonomy reflects the teaching activities in this one classroom, and that in any subsequent study, would be revised to reflect the teaching in that classroom.
## Table 32

*A New Taxonomy of Reading-to-write Cognitive Strategies for Teaching and Learning*

<table>
<thead>
<tr>
<th>Categories</th>
<th>Focus on teaching and learning reading-to-write strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Teacher) Discusses/demonstrates/evaluates</td>
<td>(Student) Refers to/demonstrates/focuses on</td>
</tr>
<tr>
<td><strong>Ideas and Information</strong></td>
<td>1.1 activating previous topic knowledge before reading or before writing</td>
</tr>
<tr>
<td></td>
<td>1.2 raising awareness of reading or listening for topic information to inform writing topics</td>
</tr>
<tr>
<td></td>
<td>1.3 raising awareness of thinking critically about or beyond the content in texts in order to build ideas for writing</td>
</tr>
<tr>
<td>Language below Sentence Level</td>
<td>2.1 building comprehension or use of collocations or synonyms</td>
</tr>
<tr>
<td>(Vocabulary)</td>
<td>2.1 building awareness of appropriate academic vocabulary in writing</td>
</tr>
<tr>
<td>Language below Sentence Level</td>
<td>3.1 awareness of parallel structure</td>
</tr>
<tr>
<td>(Sentence Grammar)</td>
<td>3.2 awareness of subordination and coordination</td>
</tr>
<tr>
<td></td>
<td>3.3 awareness of the form and use of the passive voice</td>
</tr>
<tr>
<td></td>
<td>3.4 awareness of other grammar and punctuation</td>
</tr>
<tr>
<td>Discourse: Language Use above</td>
<td>4.1 awareness of essay organization in reading sample essays or writing essays</td>
</tr>
<tr>
<td>the Single Clause</td>
<td>4.2 awareness of text organization (genre) in either reading or writing</td>
</tr>
<tr>
<td></td>
<td>4.3 awareness of paragraphing and cohesion (including cohesive devices)</td>
</tr>
<tr>
<td>Regulation of Reading and Writing</td>
<td>5.1 awareness of planning the reading task or the writing task</td>
</tr>
<tr>
<td>Task Processing</td>
<td>5.2 awareness of the importance of audience in reading texts and writing tasks</td>
</tr>
<tr>
<td></td>
<td>5.3 awareness of revising/editing written texts for grammar and sentence errors</td>
</tr>
<tr>
<td></td>
<td>5.4 summarizing/paraphrasing for comprehension or as an academic writing task</td>
</tr>
<tr>
<td></td>
<td>5.5 awareness of how to connect and assess ideas in readings for synthesis in writing tasks</td>
</tr>
</tbody>
</table>

Based on the findings of this research, Figure 25 shows a concept map based on the *Taxonomy of Reading-to-write Teaching and Learning Strategies* (Ideas, Language, Discourse and Regulation) and the connection with the episodes of teaching cognitive strategies (ECM, ESE and ERA) and learning episodes (ECLs).
Figure 25. The teaching and learning framework of teaching and learning strategies

ECM = Episode of Cognitive Modelling; ESE = Episode of Strategy Explanation; ERA = Episodes of Raising Awareness; ECL = Episodes of Cognitive Learning
Finally, the findings from this study and the revised framework exemplify the importance of connecting reading and writing strategies through explicit modelling by thinking-aloud. These findings indicate that student cognitive engagement and learning is heightened through instructional explicit modelling which, as much as possible, uses student-generated work as the teaching tool. Similar to Wilson and Bai (2010), this model calls for reading and writing teachers to have immense awareness of the self as a teacher and of the cognitive learning process of the learner. A high level of student engagement and learning may indicate that knowledge may be applied beyond the task at hand and into other tasks in other university courses.

**Summary of Thesis**

This thesis has provided insights into how one university instructor used cognitive strategies in teaching writing in an EAP course that integrated readings and some listening files with writing, and how she perceived the success of this teaching. Furthermore, the study included not only the perceptions from the class as to how cognition helped them learn but also included the perceptions of 6 focal students as to how they used cognition in the composing process. Data were collected from teacher observations over the 10 weeks of the course, 5 focal student stimulated recall sessions, teacher and focal student interviews, and class surveys.

The teacher data were initially analysed qualitatively for cognitive teaching episodes and categorized according to cognitive strategies, dependent on the level of task-modelling and the explicit think-aloud employed while the teacher demonstrated a task. Three levels of cognitive modelling emerged from the data. Episodes of Raising Awareness (ERAs) employed little or no modelling or task rationale. Episodes of Strategy Explanation (ESEs) included explanation and some demonstration of the strategy in order to validate its importance (Zhang, 2008). Episodes of Cognitive Modelling (ECMs) were explicit and suggest the teacher was cognitively engaged as she intentionally taught and practiced the strategies through specific awareness raising activities.
In the ECMs, Sophia engaged in teacher-talk or think-aloud that exemplified the process of ‘how’ and ‘why’, which she supported with student-generated work. This allowed students to essentially ‘be inside’ her head through the process. It might be thought that this think-aloud behaviour could create a teacher-centred classroom; however, this was not the case as Sophia implemented interactive questioning and group work, thereby increasing student engagement. These observational data were coded thematically according to the *Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning* and descriptive statistics were used for frequency counts and percentages.

The focal student data from the stimulated recalls were also analysed qualitatively for evidence of cognitive episodes occurring during the composing process: Episodes of Cognitive Learning (ECLs). These data were then coded quantitatively into themes using the *Taxonomy of Reading-to-write Cognitive Strategies in Teaching and Learning* in order to provide some descriptive statistics of the frequency of episodes. The data from the focal student and teacher interviews and class surveys completed the rich, detailed descriptions of how cognitive strategy teaching and learning occurred in the course.

The findings highlight specific themes where Sophia employed cognition in her teaching: content ideas from readings, vocabulary acquisition, thesis statements with parallel structure, paraphrasing strategies and argument essay structure. In the first weeks, she concentrated on the importance of being informed by content to develop ideas with relevant vocabulary use. Then, every subsequent teaching unit continually developed content and vocabulary while building in a new component, be it sentence variety or passive voice for paraphrasing. The focal students’ recalls provided evidence that they had engaged in thinking about and using the vocabulary, content and grammar from the classes in their composing processes.
In most instances, the class was high energy with both teacher and students engaged, and this may have contributed to the learning by creating an affective environment where barriers could be lowered and risk-taking was worthwhile. However, it should be noted that in Week 7 (the summary writing task), when students came unprepared for the planned in-class task, Sophia seemed to lose her motivation and employed a series of teacher-centred ERAs, telling students to summarize yet she did not model appropriate strategies. A palpable change in the energy of the room was observed. Moreover, this may have been reflected in the focal students’ ECLs in the summary writing task, as they seemed less cognitively engaged in the task. Overall, Sophia’s explicit approaches to strategy training were perceived by the students to be effective to their learning.

The other highlight of this research is the connections that Sophia drew between reading and writing by using reading-to-write techniques and by mining the texts. The course text had listening files, which Sophia mined as well. Thus, Sophia was able to integrate teaching sentence variety, passive voice, paraphrasing strategies, and argument structure into the content and vocabulary of the readings and listening files. The lessons Sophie had planned had coherence and a flow to them that were enhanced by her cognitive modelling.

**Implications of the Study**

This study has a number of implications related to theory, instructional practices, teacher education, and curriculum planning as well as fruitful avenues for future research.

**Implications for theory**

The contribution that this study makes to the literature is the detailed picture it provides related to the process of how cognitive modelling occurs. The findings also support the literature
that calls for the integration for reading and writing strategies (Hirvela, 2004). Furthermore, this study supports the literature around the complexities of paraphrasing and patchwriting, as it has shown that paraphrasing is cognitive or knowledge telling, and that text synthesis requires knowledge transformation so that writers can evaluate the skill (Hirvela & Du, 2013). There is a paucity of empirical studies within the literature, especially in second language acquisition, wherein longitudinal case studies of a teacher and a class provide such detailed findings of what occurs in the classroom and how students apply learning. Thus, this study fills a gap in the current knowledge about the role of cognition in teaching and learning.

**Implications for teachers**

The findings of this study also carry implications for seasoned teachers. The findings suggest that experienced teachers can benefit from reflection and self-evaluation of their teaching practices. Such evaluative and reflective process can include an assessment of the meta-language teachers employ. In her ESEs and ECMs, Sophia frequently used phrases such as “Notice how…” “I have to think about how…”, “Let’s think about how…”, “I need to think why…”, and “Let’s do this together…” Such an approach, as Roehler and Cantlon (1997) suggest, allows students into the teacher’s head, which in turn increases students’ active engagement in the problem-solving or teaching process. Ultimately, the results indicate that teachers can develop their own set of cognitive actions, can self-regulate and evaluate the success of teaching the task in the same way that learners cognitively plan and assess a task.

Furthermore, these findings may have implications for teachers across post-secondary disciplines, not just in the L2 context. Professors in any discipline could benefit from implementing explicit modelling of strategies into their teaching, and they could mine texts for discipline specific vocabulary or demonstrate genres of assignments such as lab reports or case
studies. These behaviours could likely be beneficial not only to ELLs, but also to native English speaking university students.

As well as benefiting the reflective practices of teachers, future professional development opportunities could draw upon the findings of this research. Indeed, training workshops could focus on how to cognitively model strategies or how to effectively think-aloud. Also, there could be value in having workshops focus on mining texts for content, vocabulary and grammar and incorporating those approaches into strategy training of paraphrasing or synthesising texts, to provide but one possible example.

**Implications for teacher education**

This study also carries implications for ESL teacher education. Becoming a cognitive teacher is a learned skill and in my experience, novice teachers frequently depend on a teacher-centred approach with little modelling. Integrating such strategies into pre-service education could prove beneficial and student teachers should be encouraged to practice these think-aloud strategies and extensive practice should be for strategy demonstration. Novice teachers might benefit from practice in giving instructions in order develop the skills to effectively scaffold the set-up of a task. Learning is often scaffolded from teacher to student and then from peer to peer, and for this to be successful, clear, modelled instructions need to be given to students. Accordingly, it may be beneficial for ESL training programs to implement cognitive modelling into training and practice teaching assessments.

**Implication for curriculum planners**

Finally, this research carries implications for institutions and curriculum planners, as in many institutions reading and writing are not integrated into courses. Despite the fact that this research did not have a specific focus on reading strategies, it still highlights the benefits of using
reading-to-write and writing-to-read strategies as a means to build academic literacy necessary for academic success across disciplines. EAP classes aim to give learners an academic foundation so that they are able to transition to write across the disciplines. However, transitioning between diverse disciplines entails writing using content knowledge, discipline specific vocabulary, and a specific genre, which could present significant challenges for some learners. Indeed, some institutions have content-based instruction (CBI) or Writing in the Disciplines (WID); however, a challenge arises where ESL instructors are unfamiliar with authentic materials and thus may not be able to provide an expert assessment of the writing (Craig, 2013). Furthermore, many ESL teachers may not be trained to teach in these disciplines. Many of the students in this current research made reference to their fields of study and the types of writing they engage in. This research implies that there may be a need for bridging or WID programs that have ESL teachers collaborate with faculty in programs. For example, ESL teachers and the students could both attend a first year course such as psychology. Students could then have supplementary classes with ESL instructors, where texts are mined for content, and academic vocabulary for writing is explored. Accordingly, this suggests the transition to writing across the disciplines may be supported with themes and vocabulary from within the disciplines. Accordingly, this scaffolded learning may cognitively engage students in the process and may be helpful to their adaptation to the new academic environment.

Limitations and Future Research

Despite its limitations, this research adds to the body of literature, and future research could arise from it. First, this study has been limited to just one second language writing classroom, one teacher, and the student participants, and the findings cannot be generalized beyond this one class and its participants. This study does have some ecological validity in that it was conducted in a natural teaching environment and the behaviours observed and recorded
were reflective of the events in the classroom. However, the ecological validity of this research is limited as it is unknown to what extend Sophia altered her teaching and behaviour as she was a participant in a study. Furthermore, the stimulated recalls of the focal students are not common learning procedures for students. In addition, the results of this study have to be undertaken carefully as the individual differences of the students, the diverse language skills of the learners and teaching focal points may vary across contexts. It cannot be assumed that similar EAP courses in comparable contexts would have an integrated reading/writing text for a teacher to ‘mine.’ Indeed, the individual differences of the participant teacher, Sophia, who was outgoing and was likely by nature an outward thinker, may have impacted the findings and may not occur with a different instructor. However, it is possible that similar results could occur with teachers with different personality types. The course also limited this research as it was in transition from a grammar focus to a reading-to-write focus. The restricted curriculum and the length of the course (10 weeks rather than 12) did not allow for a focus on reading strategies. Another limitation is that due to the large number of data in this study, only the main themes were explored, while other themes remained unexplored. Accordingly, further research could expand upon the major theme of this research with a more in depth analysis of Sophia’s discourse during the episodes in order investigate language patterns of teacher talk.

Another limitation is presence of the researcher in the classroom. My being the observer in the classroom could have influenced how the teacher planned lessons and, consequently, delivered them. It is also possible that the teacher did not exhibit her full range of teaching strategies. Furthermore, in classroom-based observational research, my assumptions and teaching background might influence interpretation of the data. As a writing teacher, I have notions as to how a course should be taught; furthermore, my years of being a teacher educator could have influenced the teaching aspects I paid attention to during the observations. However,
the strengths of this study are that it was longitudinal as I attended most sessions of the course so that I was able to capture the salient teaching moments with a cognitive strategy focus. Another strength is that the results provide us with insights into how cognitive teaching does have an impact on student learning.

This study has raised questions for future research. First, it would be worthwhile to investigate similar research questions with a larger group of students and across contexts, for example, in a course with multiple sections. This would give opportunity to investigate the individual differences between teachers in these sections in order to gauge to what extent they teach cognitively. Research could include a discourse analysis of cognitive teacher think-alouds to determine how language and teaching connect.

Second, this study was essentially with undergraduate students; consequently, there is value in researching cognitive teaching and learning at the graduate writing level in order to determine if vocabulary, paraphrasing and text synthesis remain the focus, or if graduate students and their instructors concentrate on discourse such as text organization and cohesion and pay increased attention to task regulation such as planning and revising.

Additionally, another area of research to consider is to conduct an investigation of cognitive modelling similar to this in primary school classrooms much as Pressley et al. (2001) and Olson and Land (2007) did years ago. The value of conducting such a study is that many schools today are multicultural with a high density of ELLs with many of the students in the early grades struggling not only with early literacy but also with learning English. Research could focus upon any differences in teachers’ strategic practices in teaching literacy to native speakers of English and to ELLs within a single classroom.

Finally, it would be extremely interesting to focus a study on the success of cognitive modelling of paraphrasing and text synthesis strategies as this might add to the understanding of
plagiarism and patchwriting in L2 writing. The focus of the study could attempt to implement direct strategy instruction similar to Zhang (2012), with the added aspect of an analysis of the cognitive teacher talk. The study could seek further understanding of the knowledge telling and knowledge transforming construct in paraphrasing and synthesising (Bereiter and Scardamalia, 1987; Hirvela and Du, 2013) by using focal student think-alouds with a focus on the students’ reading strategies for text synthesis and then how this knowledge is transformed into writing a critical analysis paper.

In conclusion, this case study has brought together perspectives from the literature and from the classroom. Pressley et al (2001) described the characteristics of exemplary teaching as explicitly modelling and being aware of learners’ needs. It can be said Sophia’s explicit modelling through social interactions and awareness of her students’ academic literacy needs facilitated learning. The findings demonstrate that the integration of reading and writing through cognitive teaching is perceived to be a successful by both the teacher and the students. However, with changes in technology and online systems of classrooms, an area of future research in the reading and writing construct may include listening-to-write and a new paradigm may emerge.

As a final thought, some words from Sophia, the instructor:

Get the right textbook. You need one that integrates and connect the skills—reading and writing so that the activities are twinned. And have the listening twinned to it. Listening is a form of reading. You can mine a lot of vocabulary from it. You can use it for content and grammar. It is not just the written word. We have to adapt to the learning styles of the next generation. However, the teaching generation and the studying generation have to meet each other halfway in order to do that successfully.
EPILOGUE

In the years that followed this research, Sophia has continued to teach ENGL 9001. The course has grown to have multiple sections with Sophia being the course leader. The course has moved away from being as grammar based. The course now focuses on readings and the synthesis of these readings into a critical summary, a contrast essay and a problem-solution essay. While a course text is still used, students learn how to research credible sources to supplement the text readings. Students are able to use software offered by SWU to check for plagiarism or “patchwriting” before submitting the assignment. Essays are no longer written in class as timed writings, but are written at home, which allows students time to plan and reflect as they write. Furthermore, Sophia has built peer review sessions into the course, and found them particularly helpful for weak students who receive feedback on content from their peers. Sophia hopes to add a final research paper assignment to the course. The course has certainly evolved to have a greater emphasis on building academic literacy.
REFERENCES

Bailey & D. Nunan (Eds.), Voices from the language classroom. Cambridge: Cambridge University Press, 248–277


APPENDICES

APPENDIX A: TEACHER INFORMATION LETTER AND CONSENT FORM

(Please note all consent forms were printed on institution letterhead and appropriately dated)

Dear (name of teacher);

I am a Ph.D. candidate in Second Language Education at the Ontario Institute for Studies in Education of the University of Toronto. As your director, XXXXX, has discussed with you, I am writing to you to formally request permission to conduct case study research in your classroom. This is a suitable context for my research due to the university credit-course you teach that focuses on academic reading and writing for English language learners (ELL).

As part of my thesis research, I want to find out more about EAL (English as an additional language) students’ and what ways the teaching and learning of reading and writing skills transfer to use in writing tasks and, ultimately, support the development of writing proficiency. By investigating the EAL students’ thinking processes, we may be able to better understand why EAL students have difficulty with academic writing often resulting in unintended plagiarism or dropping out of post-secondary education. Therefore, this research entitled, A case study of second language reading and writing development in a university writing class, may help to shed some light on these issues and strengthen an argument for the integration of the teaching of reading and writing.

My role in your classroom will be that of an observer as I focus on your teaching of reading and writing. I would like to conduct three short interviews with you during the semester in order to discuss your perceptions of teaching reading and writing. These interviews will take approximately 20 minutes each and will be conducted at the beginning, middle and end of the semester. With your permission, these interviews will be audio-recorded and any quotations used in the thesis or in subsequent publications or presentations will be kept anonymous and not reveal your identity.

I would like to invite your students to consider participating in this study. I will invite them to complete two questionnaires: one at the beginning of the semester and one at the end. The first questionnaire will ask students about language learning background and the second questionnaire will ask about skills learned in the class, their use and how students feel the skills help them read and write. These questionnaires will be completed outside of class time and will take students about 20- 30 minutes for the first questionnaire and 30-40 minutes for the second.

I plan to invite students to participate in this research at the end of the first class. At that time, I will ask you to leave the class so that student confidentiality is maintained, and I will hold an information session regarding the study. I will tell the students of my role as an observer in the class and that I will be attending most classes during the semester. At this time, I will also invite students to participate.
In addition, I hope to find 7 to 9 students from your class to participate in several additional tasks for in-depth case studies in order to investigate their thinking processes. Five times during the semester on a Friday after the writing lab, I will meet with students. The first session will be a training of how to think out loud about the writing process. The next four times we meet, I will ask participants to think retrospectively about their writing, and ask them to complete a short questionnaire. At the end of semester, I will interview them about their learning experience. As we have discussed, I will collect all essays at the end of each writing lab, will photocopy the ones from these students, and will return the complete set of essays to your office. This will ensure confidentiality of the participant students. If the students agree, I will keep the photocopy, which I will correlate with the retrospective thinking. If the student does not agree, I shall shred the photocopy. I am not assessing the writing, but am using the writing only for research purposes and all writing will remain confidential.

If you agree to participate, you may rest assured that your privacy will be protected at all times. The raw data gathered through this study will be kept confidential, known only to me and the members of my thesis committee. My findings will be published in my Ph.D. thesis and a summary of it will be made available to the director of your college, to you, and the students upon request. In addition, the entire thesis will be made available upon request. Your identity that of the university, the college, the course and the students will be kept confidential in the thesis and in any subsequent presentations or publications. Your name and the name of each student will be replaced by a pseudonym. Moreover, I will take great care to assure that your identity as well as your students’ identity will not be revealed in any other fashion, such as through background information. All data and tape recordings will be kept in locked files accessible only to me and will be destroyed seven years after the end of the study. Furthermore, all computer data shall be on a password protected computer to which only I have the password. These data files will also be destroyed after seven years.

I hope that you will agree to participate in this study as it may prove beneficial to both ESL students and their teachers by understanding more about teaching/learning and writing development. You may, of course, refuse permission, or withdraw from the study at any time without giving reason. Furthermore, student participants may also refuse to take part in any activity and may withdraw from the study at any time without giving reason.

In appreciation of your time, you will receive a $50.00 gift card for Chapters. Furthermore, if you wish, once the semester is completed, I can give you detailed feedback from the teaching observations.

You will find attached two copies of the consent form. If you agree to participate in the study, please complete them both and return one to me and keep the other for your records. I would greatly appreciate your involvement and cooperation. If you would like to receive more information about the study, please contact me in person, by telephone, or through e-mail. You may also contact my thesis supervisor, Dr. Antoinette Gagné at XXX

Sincerely,
Maggie Heeney
Ph.D. Candidate
Consent Form

(to be signed by the teacher participant)

**Title of the Research:** A case study of second language reading and writing development in a university writing class

**Name of the Researcher:** Maggie Heeney

**Institutional Affiliation:** Ontario Institute for Studies in Education of the University of Toronto

I have read the information presented in the information letter about a study being conducted by Maggie Heeney from the Ontario Institute of Studies in Education. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I have the option of allowing my three interviews to be audio recorded to ensure an accurate recording of my responses.

I am also aware that excerpts from the interview may be included in the thesis and/or publications to come from this research, with the understanding that the quotations will be anonymous.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher. I was informed that this project has also been reviewed and received ethics clearance from the Ethics Review Office at the University of Toronto, and I may contact them at XXXX

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Please complete both copies of this consent form, sign them, and return one copy to the researcher. Please keep one copy for your records.

I, __________________________, AGREE TO PARTICIPATE IN THE PROPOSED RESEARCH CASE STUDY THAT WAS DESCRIBED IN THE ATTACHED LETTER. I UNDERSTAND THAT I MAY WITHDRAW FROM THE STUDY AT ANY TIME WITHOUT GIVING A REASON.

Signature of teacher: __________________________________________

Name (please print): ____________________________________________  Date: __________________

Witness Name: (Please print) ________________  Witness Signature: _________________________

Date: ___________________________
Appendix B: Verbal Recruitment Script

Hello, my name is Maggie Heeney and I am a 3rd year Ph. D student from the Ontario Institute of Studies in Education at the University of Toronto in the Department of Second Language Education. I am currently working with Professor Antoinette Gagné from OISE and am doing my thesis. I am interested in reading and writing development of second language learners. My research is focusing on the relationship between teaching and learning and writing development.

I am here today to ask if you would be interested in taking part in my study. This research will hopefully lead to a better understanding of the relationship between reading/ writing, and teaching/ learning, and you will make a contribution to teachers’ understanding of the thinking processes English language learners experience when reading and writing. This research will help future educational programs and/or will help new teachers

Part of my research is to be an observer in your classroom, and so I will be here in almost all your classes over the semester. My role will be that of an observer of your teacher, and I will focus my attention on how she teaches you reading and writing skills.

Another part of my research is I am looking for students to be part of my study. I would like to invite you to consider participating in this study. All you will need to do is complete two questionnaires: one at the beginning of the semester and one at the end of the semester. The first questionnaire will take you about 20-30 minutes to complete and will ask you questions about your first language, how long you have been learning other languages such as English, your previous education experience in your country and what you are studying here at the University of Waterloo.

The second questionnaire is a little longer and will take you approximately 30-40 minutes to complete. You will complete this questionnaire at the end of the semester, and it will ask you questions about reading and writing and what skills you find useful that help you when you are writing essays. You will not complete these questionnaires during class time, but will be asked to stay after class to complete them.

In addition, I am looking for 7 to 9 students from the class to participate in some additional study tasks. These tasks are to think out loud about what you wrote in your essays. In the first couple of weeks, we will meet once after one of the classes for about 30 minutes to practice how to do the study task of thinking about how you write. Then, four times during the semester after the writing lab, I will spend about half an hour with you. I will have a photocopy of your essay. At that time, I will ask you to spend no more than 15 minutes reading your essay out loud and ask you to describe what your thought processes were when you were writing the essay. With your permission, I will audio-record your speaking and any quotations used in the thesis or in subsequent publications or presentations will be kept anonymous and not reveal your identity.

After you read your essay, I will ask you to complete a short questionnaire that will take about 10 minutes. This questionnaire will ask you about some of the things you did when you were writing such as using a dictionary or looking up grammar. I am not assessing your writing, but am just trying to understand what you were thinking when you were writing. If you agree, I will
keep the copy of your essay to help me with my research. If you don’t agree, I will shred the copy.

At the end of the semester, I will have a short interview with you that will take no more than twenty minutes. I will ask you about what classroom activities you had found to be helpful. For example, I would ask you if you found writing an outline useful or if editing techniques helped you with your writing. I will also audio-record this interview.

I would like to assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics both at the XXX and at the University of Toronto. However, the final decision about participation is yours. I should also assure you that all information from this study is confidential and that your identity will never be revealed when I write my thesis or any paper or publication resulting from this study.

If you are interested in participating, I am going to stay after the class and I can give you more information about what it means to be part of this study and answer your questions. You can also contact me by telephone at XXX or by email at XXX if you have further questions.
Appendix C: Participant Information Letter and Consent Form

(Please note that all consent forms were printed in institution letter head and appropriately dated)

Dear (student);

I am a Ph.D. candidate in Second Language Education at the Ontario Institute for Studies in Education of the University of Toronto.

Thank you for indicating an interest in participating in this research project. This study will examine how the teaching of reading and writing influences writing development in English language learners. I will be carrying out all research as part of a project I am conducting called “A case study of second language reading and writing development in a university writing class.” The following outlines the study itself and information about your participation.

If you require any further information or explanation, please contact Maggie Heeney at XXX or at XXX . You can also contact my doctoral supervisor, Professor Antoinette Gagné at XXX

The objective of the research proposed in this study is to investigate the connection between how reading and writing is taught and writing development. It is my hope that by pursuing a study of reading and writing, I will be able to make a contribution to second language teaching and learning.

A Brief Overview: If you agree to participate in the study, you will be asked to commit approximately one and a half hours over the course of the semester in order to complete the tasks.

Your involvement in the process will require you to complete two questionnaires. These questionnaires will not be completed during class time, but you will be asked to stay after class to complete the questionnaires.

- The first questionnaire will be at the beginning of the semester (It will take you approximately 20 to 30 minutes) This questionnaire will ask you about your first language, how long you have been learning other languages such as English, your previous education experience in your country and what you are studying here at University of Waterloo.

- The second questionnaire will be at the end of the semester (It will take you approximately 30 to 40 minutes). This questionnaire will ask you about reading and writing and what skills you find useful that help you when you are writing essays.

I shall also be in your classroom as an observer for the semester. I will be observing the teaching practices of the instructor. My observations, and your participation in this study, are not an evaluation of your performance in this course and your participation in this study will have no impact on your grade. A summary of the study results will not be shared with anyone, including your instructor, until after the grades have been submitted.
What are the benefits for you?
By participating in this study, you will make a contribution to teachers’ understanding of the thinking processes English language learners experience when reading and writing. Furthermore, I am more than willing to offer you a detailed summary of the results and discuss them with you at the end of the study. There will be no monetary compensation for your participation.

What risks are there for you in participating in this study?
There are no anticipated risks associated with your participation in this study. Only you and the researcher will know about the particulars of the data that are collected. All the raw data will be kept in confidence, and you will not be identified by name in the thesis, papers or publications resulting from this study. You will have access to all raw data collected about you. All the raw data collected during the study will be secured in a locked file and a password-protected computer with the researcher and after seven years will be destroyed. Accordingly, every effort will be made to hide your identity, and in the final thesis your name will be given a pseudonym.

Overall, your participation in this research study requires a commitment of approximately one a half hours from XXXXXX once at the beginning of the semester and once at the end of the semester. You may, at any time, withdraw from the study by simply indicating to the researcher or my thesis supervisor, Antoinette Gagné, of your intention to withdraw. No judgment will be made about you if you choose to withdraw from the study. If you agree to participate, you are free to decline to answer any question from the questionnaires.

In appreciation of your time for participating in this study, you will receive a $10.00 gift card for Tim Hortons.

If you have any questions at all about your rights as a participant in this study, please contact the Ethics Review Office at the University of Toronto at XXX.

Sincerely,

Maggie Heeney
Ph.D. Candidate,
Second Language Education
Curriculum, Teaching and Learning
Ontario Institute for Studies in Education
University of Toronto
Consent Form
(Print in duplicate and to be signed by the student participants)

**Title of the Research:** A case study of second language reading and writing development in a university writing class

**Name of the Researcher:** Maggie Heeney

**Institutional Affiliation:** Ontario Institute for Studies in Education of the University of Toronto

I have read the information presented in the information letter about a study being conducted by Maggie Heeney from the Ontario Institute of Studies in Education. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher.

This project has been reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact the Director, Office of Research Ethics at XXXX. Furthermore, I was informed that this project has also been reviewed and received ethics clearance from the Ethics Review Office at the University of Toronto, and I may contact them at XXXX.

Please complete both copies of this consent form, sign them, and return one copy to the researcher. Please keep one copy for your records.

I, ___________________________, AGREE TO PARTICIPATE IN THE PROPOSED RESEARCH CASE STUDY THAT WAS DESCRIBED IN THE ATTACHED LETTER. I UNDERSTAND THAT I MAY WITHDRAW FROM THE STUDY AT ANY TIME WITHOUT GIVING A REASON.

Signature of student: _____________________
Name (please print): _____________________
Date: __________________

Witness Name: (Please print) _______________________________
Witness Signature: _______________________________
Date: ____________________________
APPENDIX D: FOCAL STUDENT INFORMATION LETTER AND CONSENT FORM

Thank you for indicating an interest in participating in this research project. This study will examine how the teaching of reading and writing influences writing development in English language learners. I will be carrying out all research as part of a project I am conducting called “A case study of second language reading and writing development in a university writing class.” In addition to your involvement in this study with your other classmates, I am hoping you will agree to being involved in the study as one of several (7 to 9) students who participate in other activities. The following outlines the study itself and information about your participation.

If you require any further information or explanation, please contact Maggie Heeney at XXX. You can also contact my doctoral supervisor, Professor Antoinette Gagné at XXX.

The objective of the research proposed in this study is to investigate the effects of teaching reading and writing and to hear from students about their thinking when they write. It is my hope that by pursuing a study of reading and writing, I will be able to make a contribution to second language teaching and learning.

A Brief Overview  The 7 to 9 volunteers who agree to take part in this additional part of the study will spend approximately 4 to 5 hours over the course of the semester in order to complete the different tasks. As has been described to you, all members of your class are being asked to participate in this study, and along with you, will be asked to complete two questionnaires. You will not complete these questionnaires during class, but will be asked to stay and complete them after class. The instructor will not be in the class when you complete the questionnaires, nor will she know the results of the study until after the end of term and all grades are submitted.

- The first questionnaire will be at the beginning of the semester (20 to 30 minutes) This questionnaire will ask you about your first language, how long you have been learning other languages such as English, your previous education experience in your country and what you are studying here at University of Waterloo.
- The final questionnaire will be at the end of the semester (30 to 40 minutes) This questionnaire will ask you about reading and writing and what skills you find useful that help you when you are writing essays.

I shall also be in your classroom as an observer for the semester. I will be observing the teaching practices of the instructor. My observations, and your participation in this study, are not an evaluation of your performance in this course and your participation in this study will have no impact on your grade. A summary of the study results will not be shared with anyone, including your instructor, until after the grades have been submitted. If you agree to participate in this study as a focal participant, your involvement will require you to meet individually with me 6 times on Fridays after your writing lab.

During the first meeting, which will be approximately 30 minutes, you will do the following:

- Learn how to describe your thinking and decision making processes after having completed a writing task.
On four subsequent Friday meetings after your writing lab, we will meet in a study room in the library, we will make a photocopy and you will do the following:

- Describe the thinking processes you went through when you wrote your essay (up to 15 minutes). With your permission, these sessions will be audio-recorded.
- Complete a questionnaire (This will take you 10 minutes and you will do this three times only)

After each meeting, if you agree, I will keep the photocopy of your writing as part of my research and I will return all the essays to the course instructor. If you do not want me to keep the photocopy of your essay, I will shred it. I will not be evaluating your writing in any way, and I will not discuss your writing with your instructor, nor will I know what grades she assigns to your work. Your essays will be kept confidential in that your name shall be removed, and your essays only will be shared with my thesis committee. I will simply use them as a reference to the thinking processes you described after you did the writing.

On the last day of the course, you will have about a **20 minute interview**, and you will do the following:
- Describe activities you did in class that helped you learn.
- Describe how certain skills have helped you such as writing essay outlines

The four times we meet to hear about your thinking processes while writing and 20 minute interview. With your permission, these sessions will be audio-recorded and any quotations used in the thesis or in subsequent publications or presentations will be kept anonymous and not reveal your identity.

**What are the benefits for you?**

By participating in this study, you will make a contribution to teachers’ understanding of the thinking processes English language learners experience when reading and writing. Furthermore, I am more than willing to offer you a detailed summary of the results and discuss them with you at the end of the study. There will be no monetary compensation for your participation.

**What risks are there for you in participating in this study?**

There are no anticipated risks associated with your participation in this study. Only you and the researcher will know about the particulars of the data that are collected. All the raw data will be kept in confidence and you will not be identified by name in the thesis, papers or publications resulting from this study. You will have access to all raw data collected about you. All the raw data collected during the study will be secured in a locked file and a password-protected computer with the researcher and after seven years will be destroyed. Accordingly, every effort will be made to hide your identity, and in the final thesis your name will be given a pseudonym.

Overall, your participation in this research study requires a commitment of approximately 4 to 5 hours on consecutive Fridays from XXX to XXX, but you may, at any time, withdraw from the study by simply indicating to the researcher or the thesis supervisor, Antoinette Gagné, of your intention to withdraw. No judgment will be made about you if you choose to withdraw from the
study. In the event that you withdraw, all raw data connected to your participation will be immediately destroyed.

If you agree to participate, you are free to decline to answer any question from the questionnaires or interviews and are free to not participate in any task. In appreciation of your time for participating in this study, you will receive a $35.00 gift card for the XX bookstore.

If you have any questions at all about your rights as a participant in this study, please contact the Ethics Review Office at the University of Toronto at XX.

Sincerely,

Maggie Heeney
Ph.D. Candidate,
Second Language Education
Curriculum, Teaching and Learning
Ontario Institute for Studies in Education
University of Toronto
Consent Form

(Print in duplicate - to be signed by the student participants)

**Title of the Research:** A case study of second language reading and writing development in a university writing class

**Name of the Researcher:** Maggie Heeney

**Institutional Affiliation:** Ontario Institute for Studies in Education of the University of Toronto

I have read the information presented in the information letter about a study being conducted by Maggie Heeney from the Ontario Institute of Studies in Education. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I have the option of allowing my interviews and thinking processes to be audio recorded to ensure an accurate recording of my responses.

I am also aware that excerpts from the interview and thinking processes may be included in the thesis and/or publications to come from this research, with the understanding that the quotations will be anonymous.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher. Furthermore, I was informed that this project has also been reviewed and received ethics clearance from the Ethics Review Office at the University of Toronto, and I may contact them at XXX.

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

☐ YES ☐ NO

I agree to complete two questionnaires: one at the beginning of the semester and one at the end of the semester

☐ YES ☐ NO

I agree to have my four sessions of thinking out loud about how I wrote my essays and the final interview audio-recorded.

☐ YES ☐ NO

I agree to the use of anonymous quotations in any thesis or publication that comes from this research.
YES □ NO

I agree to complete a short questionnaire after three of my sessions of thinking out loud

YES □ NO

I agree to allow the researcher to keep copies of the essays I write for research purposes

YES □ NO

Please complete both copies of this consent form, sign them, and return one copy to the researcher. Please keep one copy for your records.

I, ___________________________, AGREE TO PARTICIPATE IN THE PROPOSED RESEARCH CASE STUDY THAT WAS DESCRIBED IN THE ATTACHED LETTER. I UNDERSTAND THAT I MAY WITHDRAW FROM THE STUDY AT ANY TIME WITHOUT GIVING A REASON.

Signature of student: __________________________________________

Name (please print) __________________________________________

Date: ________________

Witness Name: (Please print) __________________________________

Witness Signature: __________________________________

Date: ________________
**APPENDIX E: TEACHING EPISODE OBSERVATION PROTOCOL**

<table>
<thead>
<tr>
<th>TEACHER OR STUDENT?</th>
<th>COURSE FOCUS STRATEGIES*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Content</td>
</tr>
<tr>
<td></td>
<td>Organization</td>
</tr>
<tr>
<td></td>
<td>Regulation of reading and writing processes;</td>
</tr>
<tr>
<td></td>
<td>Language</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Explained why learned?</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Explained when and where used?</th>
<th></th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Strategy used?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What type of activity practiced the strategy?</td>
</tr>
<tr>
<td>--------------</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How was success of strategy evaluated?</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Type of episode:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Awareness raising;</td>
</tr>
<tr>
<td>(S)Strategic Action</td>
</tr>
</tbody>
</table>
Week 3, Day 1

Colour coding:

- **Instructor speaking**
- **Instructor speaking: Possible episode of analysis**
- **What happens in class (my observations and reflections)**
- **Class activity description**
- **Work on the board often student writing**

Agenda on the board; Comparative and Contrastive writing

1) Parallel structure sentence exercise
2) Content development to Chapter 5
3) Course map for week 3
4) Sentence variety
   i. Coordination
   ii. Subordination
5) Reading for Thursday

Page 93 in the text. She assigns this before she gives out the sentence exercise. She reads from the text and writes on the board: **Have you ever used acupuncture to reduce your pain, tried yoga to help you relax, or taken a herbal remedy to increase your energy?**

She goes through and points out the Have you used and then the crafting of the sentence. She is trying to raise awareness again of parallel structure.

She moves to the sentence exercise that they have to do in class. And she then reads out all the sentences for them. She says **“You are going to show your awareness of sentence structure that is parallel”**

They have 10 minutes for this exercise. The students all seem to have a hard time with this. I notice that she left the example sentence she had written on the board for them to see. Good strategy. None of the students seem to be looking at it though except for Oliver.

After the exercise, she starts out:

- **Be informed. When you read you are reading for writing. Reading and writing are related.** They are “smooching.” You need to remember key phrases and words. This will inform your writing …

- **Who read page 93? Look at what is listed in the chapter. How many options do we have? Two. Alternative and complementary medicine.** If you have alternative medicine, what is the hidden word that is implied here? Yes – Traditional medicine!

She then goes into some pre-reading strategies. She writes on the board “Alternative” and “Traditional.”

- **What will the third thing be? Yes. Complementary.** The title says two, but you need to think that there are 3. What do you think the relationship of complementary is to the others? Can you guess? …You can take the best from both. It comes from the word to complement.
APPENDIX G: TEACHER INITIAL SEMI-STRUCTURED INTERVIEW QUESTIONS

1. How long have you been teaching university level ESL?

2. Have you taught ESL at other levels?

3. How long have you been teaching this course?

4. Have you only taught reading and writing courses? What other courses have you taught?

5. Finish this sentence for me: The relationship between reading and writing is .......... Please explain what you mean by this.

6. From your teaching experience, can you describe any common reading and writing learning issues you have observed with your students?

7. Can you describe some of your preferred ways of teaching reading and writing?

8. What does the word “strategy” mean to you?

9. What view do you have on teaching strategies?

10. Is there anything you would like to add about reading and writing and how you perceive the student development in these skills?
APPENDIX H: MIDTERM INTERVIEW QUESTIONS

1. In class I hear you mentioning that “reading informs your writing” Can you comment a little more on this? Are you finding that the ideas from the readings are informing their writing?

2. I notice you are giving clues to vocabulary they can use as you did in both the personal branding and the comparison on medicine essays – are you seeing evidence of this vocabulary in the student writing? How about the collocations you put on the board?

3. I often hear you mention to students to ‘look for patterns’ – can you expand upon that?

4. You also often mention synthesising material in their essays for example in the essay on branding – you mentioned corporate and personal – are the students doing this? Is it relating back to the readings? Do you think that synthesising is a skill that is teachable?

5. You spent considerable time on teaching parallel structure for the thesis statement – are the students writing parallel thesis statements? Are you finding that there is parallel structure in the sentences in paragraphs?

6. I notice that you have not been teaching essay outlining to the students. Can you describe your rationale for this?

7. In the last week, you did an article activity with a student up at the overhead and you had him think through why he was using the articles as he was. What was your rationale for doing this activity and do you believe it was effective?

8. A few times when you were talking about parallel structure and sentence variety, I heard you say things like “You need to understand how you do this” Can you comment on this?

9. Is there any other evidence you see that suggests your students are using the processes you have been teaching?

10. At this point in the course, how do you perceive student reading skill? Is there anything you view as problematic for the learners?

11. How do you perceive student learning as it relates to what you have been teaching? Do you see a direct transfer?

12. At this point in the course, how do you perceive the development of student writing? Where do the greatest problems in student writing still lie?

13. Is there anything you plan to modify in your teaching during the second half of the semester?

14. Is there anything you want to add about the class?
APPENDIX I: FINAL TEACHER INTERVIEW

1. Now that the course is over, what do you perceive as the most effective strategies you taught? Why?

2. Which strategies do you think were the least effective? Why? What didn’t work?

3. Which are more important: reading or writing strategies? Why?

4. Let me ask you about in class activities -
   a. Collocation strategies? Were they successful?
   b. How about writing outlines?
   c. Did class discussion help inform their writing? Did it help add content?
   d. You mentioned synthesising readings from time to time. Was that effective?
   e. How effective were editing strategies?
   f. Was feedback on writing a way of informing student learning?
   g. What about teaching them the discrete points? Articles?
   h. What about margin notes?
   i. Tell me about vocabulary development.

5. Where was the most improvement in writing?

6. Do you have any thoughts on reading and writing strategies and their relationship to writing development?

7. Would you say that student knowledge and use of strategies increased during the semester? How?

8. When assessing student essays, where have you seen the most improvement?

9. When students write essays, have you noticed increased paraphrasing skills? If so, to what do you attribute this? If not, why do you think they didn’t increase?

10. Do you think that your students’ vocabulary has increased / improved? Why is this?

11. Do you have any suggestions that you would pass on to another teacher who is teaching an integrated reading and writing course such as yours?

12. How would you describe the process of teaching?
APPENDIX J: STUDENT INFORMATION QUESTIONNAIRE

Name: Code Name:

Please complete the following background information questions.

Background Information

1. What is the first language that you learned?

Language: _________________ How well do you know this language now?

1 2 3 4 5
Not at all Completely fluent

2. In addition to English and the first language you learned, do you speak other languages?

If yes, indicate the language below.

Language: _________________ How well do you know this language?

1 2 3 4 5
Not at all Completely fluent

Language: _________________ How well do you know this language?

1 2 3 4 5
Not at all Completely fluent

3. What is the highest level of education you have from your country?

a) High school ______ b) Undergraduate degree ________ c) Graduate degree

If you have a degree from your country, what is it in? _______________________

4. How long have you been in Canada? ____________

5. Which program are you enrolled in at this university? What is your major/minor/specialization?

6. What year of your program are you in (e.g., first year, second year)?
7. Have you taken any English classes in Canada that prepared you for academic English by teaching you reading skills and essay writing? Yes ________  No __________

   If so, how many courses? ______
   If so, how long were you in each course? ____________________

8. Which is more difficult for you?

   Reading in English _____  Writing in English_____  They are the same___

9. Please write a few sentences about any difficulties you feel you have when you write.

10. Please write a few sentences about any difficulties you feel you have when you read.
APPENDIX K: FINAL STUDENT QUESTIONNAIRE

Name:  
Code Name:  

Please answer the following questions.

1. What can you say has been the most important thing you have learned from this course this semester?

2. Did the classroom activities listed below help you when you were reading course texts and writing the in-class essays? Tick the answer that best describes how the activity helped.

<table>
<thead>
<tr>
<th>Type of classroom or course activity</th>
<th>Really helped me a lot</th>
<th>Helped me some of the time</th>
<th>Didn’t help me much</th>
<th>Didn’t help me at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using vocabulary building strategies such as learning the collocations in the readings to help you when you wrote</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Practicing parallel structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Planning ahead or creating writing outlines for essays</td>
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<tr>
<td>Having class discussions about the reading topics</td>
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<tr>
<td>Making margin notes about the readings</td>
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<tr>
<td>Synthesising material from different readings in order to write the essays</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Talking about the importance of editing strategies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practising paraphrasing techniques</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practising summarizing techniques</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getting teacher feedback on your writing from draft one to draft two</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Listening to the sound files and taking notes</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Practicing specific grammar points such as articles, modals, and the passive</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

3. Can you describe specifically how any of the activities above helped you when you were reading and writing?
4. Are there any strategies you learned or do that are useful for helping you be a better reader?

5. What reading strategies do you think are least useful?

6. What about writing? Do you think the reading strategies you use are similar to the ones you use in writing? Why or why not?

7. Is there any one strategy the instructor taught that you perhaps had not used before this course?

8. What writing strategies do you find the most useful? Why?

9. What writing strategies do you find least useful. Why?

10. What do you think has improved most for you in your writing?
APPENDIX L: RETROSPECTIVE STIMULATED RECALL PROTOCOL INSTRUCTIONS

The student are asked to read the essay sentence by sentence and describe his/her thought processes that occurred when writing. All students follow the same format and think aloud for 15 minutes. At that time, the student is be thanked and asked to stop.

The general instructions are as follows:

**Read each sentence out-loud and at the end of each sentence, tell me what you were doing and thinking about when you were writing this.**

The following guiding questions are given when the student hesitates for about 15 seconds.

- Can you say more about that?
- Keep going.
- What did you do next?

Clarification seeking comments from the researcher are as follows:

- What do you mean?
- How did you do that?
- Can you show me an example?
- Can you explain further?
- Do you have anything else to add?
- Can you tell me about this last sentence?
- Can you tell me about the language you used in this sentence?
APPENDIX M: FINAL FOCAL STUDENT PARTICIPANT INTERVIEW QUESTIONS

1. When you compare your writing now to the beginning of the semester, do you think your approach to the writing process has changed? What has changed for you?

2. What activities did the teacher do in the class that you think helped you with your writing?

3. Tell me your thoughts on how useful you found some of these activities the teacher did in class? How did they help you in reading and writing?

   Using vocabulary building strategies
   Creating writing outlines
   Having class discussions about the reading topics
   Talking about synthesising material from reading
   Talking about the importance of editing strategies
   Practicing paraphrasing activities
   Getting teacher feedback on your writing – the error averages.
   Working on the finer grammar points did this help error averages?

4. What is still difficult for you? Is one skill more of a challenge than the other?

5. What are you going to take away from this class as really valuable for future studies?
### Appendix N: Example of Coding

| Week 5 Day 1 | ECM 3.5 | Student sentence on the board (Grammar Review)  
Mainstream medicines and complementary medicines is all together a great remedy because of their integrative nature.  
She then thinks out loud:  
“What do you think of the ‘s’ on medicine? We don’t need them. I have to think to myself … Do I need them? The verb should be ‘are,’ so no I don’t need the ‘s.’ What about the word remedy? Why did the writer use the article ‘a?’ Ah, it is first mention. But look at the word ‘remedy.’ Should it be singular or plural? Look at the word ‘their.’ Does it seem to agree? No? How can I revise it? What about the word ‘all together’ can I say that better? How about the word great? Doesn’t that seem informal? I need to be academic. What should I say?”  
(Then she get the students to supply the answers) |
| 2 | ESE 3.3 | Mainstream medicine and complementary medicine offer great remedies for the patient because of their integrative nature.  
(T) Look at this… ‘For the patient.’ Why do we have ‘the.’ We haven’t met the patient? Can I say ‘a patient?’ Sure I can. How can both be right? What do you think?  
(S) Make it plural if you are not sure.  
(T) However, in medicine, we often use “the” to talk about the doctor and the patient. |
| 3 | ECM 3.3 5.3 | To maintain regimen, people have to do exercise at least twice a week.  
“What does regimen Mean? I think it Means schedule, right? What about regimen? Is it countable or not? Ok. It is countable. What do I have to do now? Add ‘a.’ What about the word maintain? It Means ‘keep.’ What am I keeping? The sentence does not seem right. Oh, I am keeping a healthy lifestyle. What about ‘to do?’ Do I need it? Shall I change it to ‘keep an exercise regimen?’ Notice how I used the article here. Let me re-write this as a revised sentence.”  
To maintain a healthy lifestyle, people have to keep an exercise regimen of at least twice a week.  
“How does that sentence look? Is it okay? Is it clear?” |
| 4 | ERA 2.3 | What about this sentence. Strong brands always get consumer loyalty. Right – get is slang. Can you think of another word? Earn. Yes that’s good. |
| 6 | ERA 2.3 | What if I say ‘One believes?’ Right – I should not use one in academic writing. Why not? Yup – I run into problems with him/her. Drives the reader crazy. What is better? Plural, yes. Here what shall I use? Experts believe... that is good. What kind of experts? Oh. Marketing experts. That’s really good |
# Practice Argumentation Essay Outline (High-tech Harvest Lecture)

<table>
<thead>
<tr>
<th>Part</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hook</strong></td>
<td>Worldwide hunger has been an issue for many years. As a result, researchers have spent much time developing solutions to food shortages.</td>
</tr>
<tr>
<td>Context</td>
<td>The research into Genetically Modified foods (GM foods) focuses on alleviating these hunger issues.</td>
</tr>
<tr>
<td>Antithesis/Thesis</td>
<td>Even though GM foods have some benefits, this food technology is more dangerous than it is beneficial.</td>
</tr>
<tr>
<td><strong>Response</strong></td>
<td>The benefits of GM foods include an increase in overall crop yield and resistance to pesticides, herbicides, and climate change.</td>
</tr>
<tr>
<td></td>
<td>However, GM foods pose danger to two forms of health: human and environmental.</td>
</tr>
<tr>
<td>1. concession</td>
<td></td>
</tr>
<tr>
<td>2. refutation</td>
<td></td>
</tr>
<tr>
<td><strong>First Proof</strong></td>
<td>GM foods appear to be hazardous to people with allergies.</td>
</tr>
<tr>
<td></td>
<td>People who have allergies should be cautious about consuming GM foods. In the “High-tech Harvest” lecture, the professor argues that...</td>
</tr>
<tr>
<td><strong>Second Proof</strong></td>
<td>GM foods may be harmful to the environment. For example, GM plants may cross-pollinate with weeds.</td>
</tr>
<tr>
<td></td>
<td>In addition, these foods may put environmental health at risk by creating super weeds.</td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td>1. Before any food is released to markets, governments should verify the safety of the food.</td>
</tr>
<tr>
<td></td>
<td>2. The billions of dollars spent on GM foods should be spent instead on more pressing issues such as cancer research, poverty reduction, and education improvements.</td>
</tr>
<tr>
<td></td>
<td>3. Because of the dangers GM foods pose to human and environmental health, it would be more beneficial to reduce hunger in developing countries.</td>
</tr>
</tbody>
</table>

*This outline serves as an abbreviated example. Clearly, it lacks the detail necessary Don’t plagiarize Sophia. She will catch you!*

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