SELF-REGULATION DURING A READING-TO-WRITE TASK:
A SOCIOCULTURAL THEORY-BASED INVESTIGATION

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ABSTRACT

Most composition studies focus on students’ writing processes and written products without integrating reading into their research activities. More recently, researchers have acknowledged the reciprocal reading-writing relationship and begun to examine reading-to-write or discourse synthesis processes. Research shows that discourse synthesis is cognitively demanding and that most second language writers lack linguistic, mental, and sociocultural resources to perform this task effectively. Existing studies have not emphasised the role of self-directed speech as a self-regulatory strategy while students read multiple texts in order to write. This thesis addresses this gap in the literature.

Informed by sociocultural theoretical notions that cognition is socially mediated and that speech is instrumental in learning and development, this qualitative multiple-case-studies thesis examined how five Thai EFL tertiary students applied their knowledge and skills, following explicit concept-based instruction on discourse synthesis, textual coherence, and argumentation.

The researcher designed and delivered a four-week intervention in which the learning concepts, materials, and verbalisation were instrumental in promoting conceptual understanding and reading-to-write performance. Explicitly taught verbalisation or self-directed speech, together with learning materials specifically designed as schemes for task orientation, was a key for self-regulation as participants read multiple texts in order to compose an argument essay.

The study adopted an activity theoretical framework and microgenetic analysis. The analysis aimed to describe the participants as social beings and to outline their self-regulation as it unfolded during a mediated reading-to-write activity. Data from a pre-task questionnaire on strategy use and from a post-task written self-reflection form together with video-recorded data during the end-of-intervention discourse synthesis task and interview data were triangulated to examine how reading-to-write activities were mediated and regulated. Findings were organised around four main themes: participants
as readers and writers of English, essay argument structure, microgenetic findings of unfolding self-regulatory behaviour during the discourse synthesis activity, and developmental gains as perceived by the participants during concept-based instruction.

The findings in this study show that participants’ reading and writing difficulties and argumentation were, in part, shaped by the social, historical and cultural factors in the Thai EFL context, and that participants’ strategic application of verbalisation and learning materials mediated their developmental changes and self-regulation. During the discourse synthesis task, participants used self-directed speech as a strategy and demonstrated varying degrees of self-regulation over various task aspects. Successful task completion indicated purposeful mediated learning with strong orientation towards the task, based on conceptual understanding, specific goals, and voluntary inclusion of learning materials as psychological tools. All participants reportedly viewed verbalisation as a useful strategy and most participants were able to describe their increased theoretical understanding of the concepts explicitly taught. However, their conceptual understanding did not always translate into their actual performance.

These findings raise pedagogical implications and highlight the need for human mediators to make explicit the learning concepts, materials and strategies, so that theoretical understanding and learning tools can lead to meaningful task performance. Based on the above findings, this thesis proposes a self-regulation model and calls for future research to investigate how explicit verbalisation training can be systematised.
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<table>
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<th>Abbreviation</th>
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<tr>
<td>ASEAN</td>
<td>Association of South-East Asian Nations</td>
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<td>EFL</td>
<td>English as a Foreign Language</td>
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<td>ESL</td>
<td>English as a Second Language</td>
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<td>L1</td>
<td>First Language</td>
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<td>L2</td>
<td>Second Language</td>
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<tr>
<td>SCOBA</td>
<td>Scheme of Complete Orientation Basis of Action</td>
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<tr>
<td>SCT</td>
<td>Sociocultural Theory</td>
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<tr>
<td>SLA</td>
<td>Second Language Acquisition</td>
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<td>STI</td>
<td>Systemic Theoretical Instruction</td>
</tr>
<tr>
<td>TESOL</td>
<td>Teaching of English to Speakers of Other Languages</td>
</tr>
<tr>
<td>TM</td>
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CHAPTER ONE
INTRODUCTION

“Reading and writing are ways of growing because they are ways of knowing other minds, minds outside of oneself and minds within one’s own mind. Through reading and writing, minds are transported. Self seeks otherness, knows otherness, and draws otherness back into self. And because for a time otherness becomes part of self, the distinctions between self and otherness blur. When mind meeting occurs, self changes, self grows, self is a new self.”

(Fitzgerald, 1990, p. 96)

The above excerpt captures the social, integrated and transformative nature of reading and writing, the very perspective adopted in this thesis.

This chapter provides an overview of the teaching of reading and writing as social, integrated and reciprocal. Also included in this chapter are the theoretical framework, the background, rationale, research questions, and significance of the study.

1.1 Reading and writing as social, integrated and reciprocal processes

Reading, once viewed as a passive act, is now understood to be a goal-oriented, socially-situated and interactive undertaking (Bernhardt, 2005). Similarly, writing, once regarded as a product-driven activity, is now viewed as a transactional, recursive, process-based, socially-situated and purposeful act (Ferris & Hedgcock, 2005). As noted by McKay (1993), “Reading and writing are not private affairs involving a set of discrete skills but are rather social acts that one engages in within a community” (p. 68). The social and interactive nature of reading and writing are reflected in how meanings are created and shared between writers and readers in a transactional and dialogic manner (Rosenblatt, 1994). Essentially, the meaning making process requires both writers and readers to be actively engaged in social collaboration. Both readers and writers draw on their multiple experiences and purposes in order to make sense of what they read and write. The value of written texts may only be derived from the shared effort of text
producers and text consumers (Hyland, 2009). The quality of second language (L2) reading and writing performance in both ESL and EFL contexts are also partially determined by learners’ socio-cultural background, their first language (L1) literacy, and their socio-cultural knowledge of the target language (Canagarajah, 2002).

As well as being socially-embedded, reading and writing are regarded as reciprocal academic literacy skills. The reciprocity of reading and writing is acknowledged as “reading and writing work in tandem to promote and enhance one another. In other words, writing like a reader becomes inextricably bound up with reading like a writer” (Zamel, 1992, p. 481). Furthermore, reading can serve as informational and linguistic input for writing; learners who read more tend to write better than those less occupied with reading (Grabe & Kaplan, 1996; McGinley, 1992).

In higher education, reading and writing are often performed concomitantly (Plakans, 2009a). For instance, within a single writing task, writers can be seen carrying out at least three types of reading acts, namely, reading instructions, reading source texts and reading to evaluate. In evaluating their own written work during revising and editing processes, writers simultaneously assume the role of text producers and text consumers (Gebril & Plakans, 2009; Hayes, 1996). Likewise, Leki (1998) points out that, “academic writing in particular draws heavily on reading” (p. V). Similarly, Campbell (1990) contends that ‘even the most original academic paper integrates facts, ideas, concepts, and theories from other sources by means of quotations, paraphrases, summaries, and brief sentences” (p. 211). Taken together, these statements emphasise the reciprocal relationship of reading and writing, centring on the recycling, reformulating, and recreating of texts being read and written within a given academic community. In short, writing within a given discipline requires student writers to read extensively in order to both understand academic discourse and write academically (Hirvela, 2004).

Most ESL/EFL students find academic writing, particularly, writing from sources cognitively demanding (Pecorari, 2003). Reading and writing at the tertiary level is a tool for learning and understanding, requiring writers to “judge credibility of sources, argue effectively, evaluate arguments, understand and convey complex information, and systematically develop ideas” (Crusan, 2010, p. 13). Inevitably, many L2 learners encounter a number of complex texts and struggle with academic language while writing from sources (Horowitz, 1986; Shi, 2004). Hirvela (2004) hypothesises that “the
problems in writing may actually start in problems with reading” and that it is unlikely that unskilled readers will be skilled writers (p. 39). Hirvela further notes that L2 reading and writing tend to be taught separately and “what each skill can contribute to the other is not recognized” (p. 39).

In summary, both reading and writing are regarded as social, reciprocal and cognitively demanding tasks in which readers/writers draw on lexical, syntactical, rhetorical, experiential, and sociocultural resources (Matsuda, 2003). Based on the social, interactive and reciprocal nature of reading and writing activities, research shows that reading and writing as literacy skills should be more socially contextualised, practiced and fostered concurrently and integrally (Ferris & Hedgcock, 2005). Reading and writing proficiencies are essential for academic success (Hirvela, 2004). Tertiary students must read multiple texts which later form the foundation and content of their writing. This task, known as discourse synthesis, requires students to select, read, understand, summarise, paraphrase, synthesise, and acknowledge the sources (Spivey, 1990).

In the present study, discourse synthesis was the main reading-to-write task introduced to participants. The task entailed writing an argument essay based on three short source texts. Toulmin’s argument model and argumentative coherence (discussed in detail in Chapter Two) were taught during a four-week research intervention. How participants constructed their argument and how they developed logical and semantic progression to create coherence in their writing were the primary research interests.

1.2 Theoretical framework

This thesis is grounded within the framework of sociocultural theory (SCT) which posits that the cognitive development of an individual has its origin in social interactions (Vygotsky, 1978). Based largely on the work of Vygotsky, sociocultural pedagogy is predicated on how humans interact with their surroundings through actions mediated by cultural tools and others (Lantolf & Thorne, 2006). SCT-based instruction typically focuses on how social interaction, in which speech plays a significant role, can mediate learning (Aljaafreh & Lantolf, 1994). Classroom instruction provides opportunities in which learners’ cognitive growth can be promoted by a careful manipulation of social activities and instructional materials (Negueruela, 2008).
Sociocultural theory posits that language is the most important mediational means for cognitive development. According to Vygotsky (1978), language, a system-based semiotic tool, particularly speech, is what mediates humans’ capacity to think. Self-directed speech reorganises human thinking. “Speech does not merely serve as the expression of developed thought. Thought is restructured as it is transformed into speech. Thought is not expressed but completed in the word” (Vygotsky, 1987, p. 251). Also, self-directed speech is instrumental in problem-solving activity. “It increases and is more persistent every time the situation becomes more complicated and the goal more difficult to attain” (Vygotsky, 1978, p. 25). Speech, from these perspectives, regulates humans’ thinking and thus action.

An important SCT pedagogical objective is, therefore, to mediate learner’s capacity to self-regulate. Self-regulation, that is, the ability to make decisions, work out how to solve problems, and become aware of his/her own action, according to Vygotsky (1986), emerges as a result of a person first being regulated by objects and by others. As individuals grow, they learn to organise and take control of their activity by adopting the regulatory means first introduced through social interactions.

Informed by sociocultural perspectives on human learning and development, this study adopts three sociocultural theoretical stances: the view of human activities in their sociohistorical contexts based on activity theory (Leont’ev, 1981), the instructional design and pedagogical approach based on Systemic Theoretical Instruction (STI) (Gal’perin, 1969), and the focus on human development as it unfolds (Vygotsky, 1978), all of which are discussed in Chapter Two and Three. In the ensuing sections, the research background, rationale, research purposes, research questions, and significance of this thesis are discussed.

1.3 Background to the study

The research context in this thesis is the Thai EFL learning environment. In Thailand, students are essentially learning English as a foreign language (EFL). Unlike learning contexts in neighbouring countries such as Singapore, Malaysia or the Philippines where English has formed a solid foundation for official communication, English is not used as an official language in Thailand.
In Thai EFL classrooms, reading and writing are still viewed as two separate skills, thus taught in separate classes, and although for English major students “reading and writing are supposed to be learned together” as stated in their curriculum, in reality this is not the case (Kaewnuch, 2008, p. 87). The relationship between reading and writing remains unexplored in English curricula. “For a very large part, English education in Thailand adopts a purely functional approach, which makes students learn the body of the language rather than its social aspect” (p. 3). Further, Thai EFL classes are characterised by exam-driven, over-crowded, form-focused, text-based and teacher-led environment (Wisajorn, Suwattigul & Tremayne, 2006). Generally, most Thai EFL learners make very little progress in their English reading and writing classes and graduate with below average English proficiency in comparison to students from neighbouring countries (Wiriyachitra, 2004). The majority of Thai tertiary EFL students do not have adequate integrated reading and writing skills and their writing skills in particular have been shown to be low (Wongsothorn, 2002).

1.4 Rationale for the study

The theoretical perspectives arising from SLA reading and writing research in the past decades strongly suggest that there is a reciprocal relationship between the acquisition of these two skills and that such a relationship could further enhance learners’ academic performance when reading and writing are taught together (Weigle, 2002). Following the interactive and reciprocal nature of reading and writing activities, the view that reading and writing need to be more socially contextualised, practised and fostered concurrently and integrally has been gaining ground through research (Ferris & Hedgcock, 2005).

Moreover, the reading of multiple texts in order to write has been used in assessing L2 writing skills for university admission purposes. Large-scale writing tests such as TOEFL and GRE require L2 learners to complete their writing tasks based on provided source texts (Crusan, 2010) and “source-based writing is becoming more common in tests of academic English” (Weigle & Parker, 2012, p. 118). In Thailand, however, reading and writing assessments are not known to overlap. Studies on reading and writing do not converge. To my knowledge, no empirical research into writing-from-sources from a sociocultural perspective has been conducted in Thailand. Although some key sociocultural perspectives are applied in research conducted by Thai scholars, largely
through the addition of group discussion or collaborative pair work into research activities, activity theory (Leont’ev, 1978) and Systemic Theoretical Instruction (STI) (Gal’perin, 1969) combined as a theoretical framework has not, to the researcher’s knowledge, been applied in any reading-to-write research.

Writing research in Thailand has not been as prolific as research on other aspects of language teaching and learning, i.e., vocabulary, syntax, reading, listening and speaking. A modest volume of Thai EFL writing research has also been narrow in scope and mainly aimed at identifying errors in students’ written products (Kaewnuch, 2008). Another group of studies on Thai EFL writing has been those related to web-based writing, for instance, on-line journals, chat-room conversations, and web-blog writing. This second category of research, while contributing to users’ English communicative competence and fluency as well as increasing students’ motivation to write, tends to focus on social strategies and does not pay close attention to the writing process.

Abasi (2012) believes composition research agendas can be broadened to include more studies on “the process of writing in various social, cultural, and educational settings” (p. 195) to shed light on how context-sensitive sociocultural factors may influence L2 composition. Roca de Larios (2013) observes that a large volume of composition research includes collaborative writing and social interaction and calls for research to examine “the potential for language learning involved in the completion of self-sustained complex tasks by individual writers” (p. 445). The present study, in part, has addressed these gaps in the literature.

Finally, despite the frequently quoted SCT notion that speech is regarded as the most powerful semiotic tool, empirical research based on the role of speech as a learning strategy for academic writing at tertiary level from a sociocultural perspective has been slow to emerge. Only a few studies have investigated the process of academic writing from the sociocultural standpoint with speech as a key construct. More specifically, to date, sociocultural-based literature on reading-to-write at tertiary level in foreign and second language contexts is limited. This study aims to make a contribution in this area.

1.5 Research purposes

The present study aims at investigating self-regulation during a reading-to-write task. It explores the role of verbalisation (self-directed talk) as a self-regulatory strategy.
The study also seeks to describe the participants’ developmental gains and new conceptual understanding, and to gain insights on how individual learners, having first been introduced to new learning concepts, tools and strategies, interact with task demands and available resources.

1.6 Research questions

This thesis is guided by the following research questions.

RQ 1: How do participants describe themselves as readers and writers of English?

RQ 2: How do participants construct their argument essay?

RQ 3: How do participants self-regulate as they interact with text and task during discourse synthesis?

RQ 4: What do the participants perceive themselves to have learned during concept-based instruction?

1.7 Significance of the study

The present study is believed to be significant from a number of perspectives.

1. From a sociocultural pedagogical perspective, the present study adds to the growing body of SCT-based research, particularly on strategy training in tertiary ESL/EFL writing contexts in which SCT scholarly investigations of multiple complex academic literacy issues have been rare. More specifically, it is hoped that the findings of the present study will add to the body of knowledge on reading-to-write process using the concept-based approach through Gal’perin’s (1969) Systemic Theoretical Instruction (STI).

2. From a strategy training perspective, this study is significant because it investigates verbalisation as a self-regulatory strategy, thus expanding the literature on the acquisition of writing strategy and process writing. By describing the process by which participants appropriated the concepts of discourse synthesis, argumentation, and textual coherence, the findings from this research contribute to the growing understanding of how verbalisation as a strategy operates within an English language learning context.
Furthermore, whereas most strategy-based studies focus on the impact of strategy training, reporting pre- and post-intervention differences in products of learning such as test scores or snapshots of discrete strategy application, very few qualitative studies have focused on developmental changes. Unlike outcome-oriented quantitative studies, the present sociocultural-informed microgenetic qualitative inquiry aims to present a detailed description of change as it occurs in real time.

3. From both ESL and EFL composition research perspectives, studies on writing-from-sources are scant. More specifically, research-based literature on reading-to-write within the Thai EFL context is modest; there has been no extensive research study carried out in EFL reading-to-write area, particularly one adopting the SCT perspectives, and more specifically with the EFL post-secondary population. Findings from this research add to strategy instruction knowledge and may provide researchers with additional means for investigation into second language writing research particularly in the area of writing from multiple sources.

1.8 Organisation of the dissertation

This thesis consists of six chapters. Following this introductory chapter the rest of the thesis is organised as follows.

Chapter Two reviews the literature pertinent to this thesis. Section one discusses key sociocultural tenets, activity theory, and a SCT pedagogical approach. Section two covers key concepts taught during the research intervention. The chapter concludes by addressing the sociohistorical account of the Thai EFL context presented in section three.

Chapter Three describes the research methodology and provides justifications for key methodological decisions regarding research design, setting, participants, data collection, research instruments, and analysis procedures. It also addresses research trustworthiness at the end of the chapter.

Chapter Four outlines the research intervention. It also discusses key instructional activities and materials.

Chapter Five presents key findings of this research. Findings are organised case by case.
Chapter Six provides the answers to the research questions and discusses the major findings in light of previous research. The chapter also addresses the limitations of this study, presents pedagogical implications, and outlines methodological and instructional contributions made by this thesis. Finally, the chapter presents recommendations for further research, followed by the concluding comments.
CHAPTER TWO
LITERATURE REVIEW

This literature review is divided into three main sections. The first section presents an overview of sociocultural theory, activity theory, and a key SCT pedagogical approach based on Systemic Theoretical Instruction. The second section discusses three key concepts central to the research intervention, namely, discourse synthesis, argumentation, and textual coherence. The third section presents a sociohistorical account of the Thai EFL context in which this thesis is situated.

2.1 Sociocultural theory (SCT)

This section presents the works of three prominent Russian scholars whose inquiries inform three interrelated theoretical positions underpinning this thesis: (1) key sociocultural tenets based primarily on the work of Vygotsky (1896-1934); (2) activity theory based on the work of Leont’ev (1903-1979); and (3) Systemic Theoretical Instruction (STI) based on the work of Gal’perin (1902-1988).

2.1.1 Key SCT constructs

Key SCT constructs covered in this section are Zone of Proximal Development, internalisation, mediation, spontaneous and scientific concepts, self-regulation, and private speech.

2.1.1.1 Learning and development in the Zone of Proximal Development

Vygotsky (1978) defines Zone of Proximal Development (ZPD) as “the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p.86, italics in original). In a learning context, social collaboration is needed to assist in the unfolding of potential development or “functions that have not yet matured but are in the process of maturation” within the ZPD (p. 86).
One SCT concept closely associated with ZPD is scaffolding which is a form of supporting mechanism enabling learners to perform a task that they would otherwise be unable to successfully complete alone (Wood, Bruner & Ross, 1976). Scaffolding is a “process of ‘setting up’ the situation to make the child’s entry easy and successful and then gradually pulling back and handing the role to the child as he becomes skilful enough to manage it” (Bruner, 1983, p. 60). The level of support through scaffolding is proportional to the degree of task difficulty and learners’ ability. “Scaffolding suggests moveable and malleable supports that are faded when superfluous” (McCaslin & Hickey, 2001, p. 236). Scaffolding is essential in a classroom where Vygotskian ZPD is operationalised (Wells, 1999). In what follows, I discuss learning and development from a Vygotskian perspective.

While learning and development are both situated within cultural practices, Vygotsky (1978) differentiates learning from development and asserts that while human development may be induced by learning, these two processes advance at different rates and do not proportionally reflect one another. That is, a given amount of learning does not result in an equal amount of cognitive development. Vygotsky defines development as “a complex dialectical process characterized by periodicity, unevenness in the development of different functions, metamorphosis or qualitative transformation of one form into another, intertwining of external and internal functions, and adaptive processes which overcome impediments” (p. 73). Development is not an individual, internal, or independent process; it involves both biological and social reformulation (Wertsch & Stone, 1985). Because cognitive development is derived initially from external cultural sources, it is socially shaped (Lantolf, 2000). As learning and development are socially and culturally embedded, “the true direction of the development of thinking is not from the individual to the social, but from the social to the individual” (Vygotsky, 1986, p. 36).

Significant to the discussion on learning and development are lower and higher mental functions. According to Vygotsky (1978; 1997), lower mental functions are biologically-enabled primitive abilities through basic sensory perception and natural memory such as seeing, recognising simple facts or objects, and involuntary attention in response to one’s surroundings, whereas higher mental functions are voluntarily executed and derived from socially-enabled activities. These latter functions include focused attention, logical memory, and abilities plan and problem-solve. Higher mental functions
differ from lower mental functions in that they are deliberate, voluntarily-controlled and mediated by cognitive tools (Vygotsky, 1997).

Vygotsky (1978) argues that higher mental development is an intra-individual psychological activity which has its genesis in an inter-individual realm. He explains this genesis in terms of his genetic law:

Every function in the child’s cultural development appears twice: first, on the social level, and later on the individual level; first, between people (interpsychological), and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formulation of concepts. All the higher functions originate as actual relations between human individuals (p. 57, italics in original).

Vygotsky maintains that higher mental functions are not formed independent from learning and instruction. The formation of higher mental functions is predicated upon social interaction from which individuals draw upon sociocultural models within the environment. “Psychological processes emerge first in collective behavior, in cooperation with other people, and only subsequently become internalized” (Stetsenko & Arievitch, 1997, p. 161). Following internalisation, these processes transform and become integral to the repertoire of knowledge the learners may draw on.

2.1.1.2 Internalisation and appropriation

Essentially, internalisation is a process by which reliance on concrete artefacts and assistance from others gradually gives way to a person’s own mental manipulation (Vygotsky, 1981). Conceptually, internalisation is not simply the transplantation of external functions into “a pre-existing, internal “plane of consciousness”: it is the process in which this internal plane is formed” (Leont'ev, 1981, p. 57). Thus, internalisation is understood as a transformative process and not a mere copy of external stimuli or “transmission of pieces of knowledge” (Lantolf & Thorne, 2006, p. 158). Wertsch (1998) contends that internalisation denotes passive and static roles for the individual and does not encompass appropriation which presupposes understanding, purpose and mastery. Wertsch refers to appropriation as the process of “taking something that belongs to others and making it one’s own” (p. 53) and considers mastery as an expert’s “knowing how” to use tools (p. 50). Lantolf and Thorne (2006) contend that internalisation adequately and effectively encompasses both appropriation and mastery. They conclude that internalisation, along with appropriation, “is about making something one’s own” (p.
Appropriation, in this sense, encompasses participants’ understanding of and their active engagement with learning tools through physical and psychological connections and implementation and participants’ ability to realise their goals through these tools.

From a Vygotskian perspective, one aspect of meaningful engagement which could lead to internalisation is imitation. Vygotsky (1998) emphasises the significance of imitation in purposeful learning. “Speaking of imitation, we do not have in mind mechanical, automatic, thoughtless imitation but sensible imitation based on understanding the imitative carrying out of some intellectual operation” (p. 202). In L2 learning, De Guerrero and Commander (2013) note that learners’ focused attempts to master linguistic models, repeatedly and progressively gaining control over the task, point to persistent imitation which is “cyclical, deliberate, and potentially transformative” (p. 435). Purposeful intellectual engagement through imitation is essential in supporting internalisation of culturally-informed artefacts and practices (Lantolf & Thorne, 2006). Internalisation of cultural tools and practice is enabled through mediation.

2.1.1.3 Mediation

Mediation is pivotal in human learning and development (Vygotsky, 1978), and is regarded as “the instrument of cognitive change” (Donato & McCormick, 1994, p. 456). Lantolf and Thorne (2006) contend that “there are no uniquely human actions that are not mediated” (p. 63), and define mediation as “the process through which humans deploy culturally constructed artifacts, concepts, and activities to regulate (i.e. gain voluntary control over and transform) the material world or their own and each other’s social and mental activity” (p. 79). Cultural artefacts or tools can be physical or psychological. Examples of physical tools are hammers, pens, computers, etc., whereas mental tools are “language; various systems for counting; mnemonic techniques; algebraic symbol systems; works of art; writing; schemes; diagrams, maps, and mechanical drawings; all sorts of conventional signs; etc.” (Vygotsky, 1981, p.137). Physical tools are projected outwards to change the structure of the environment, whereas psychological (mental) tools are projected inwards to change the structure on one’s cognition (Vygotsky, 1978).

The mere presence of physical and psychological tools, however, does not guarantee effective mediation (Kozulin, 2002). In school-based learning, psychological tools with “a rich educational potential” may not be realised by the individuals as they may not understand how the tools work, and a teacher or human mediator is required to
spell out the benefit of the tools and assist learners in adopting them (Kozulin, 2003, p. 35).

Similarly, Donato & McCormick (1994) note: “Mediators, in the form of objects, symbols, and persons [are required to] transform natural, spontaneous impulses into higher mental processes, including strategic orientations to problem solving” (p. 456). The presence of a human mediator may reduce or promote “empty verbalism” whereby certain knowledge, such as definitions of terms or word meanings, is learned for the sake of knowing but the knowledge does not lead to practical activity (Vygotsky, 1987, p. 170). To avoid verbalism, teachers as human mediators must make clear the “(a) attitudes and values concerning what are worthwhile activities to engage in; (b) understanding of the practice involved in these activities, and (c) mastery of the relevant artifacts and of the procedural and substantive knowledge associated with their use” (Wells, 1999, p. 138). Such deliberate instruction is referred to by Wertsch (2007) as “explicit mediation”, whereby mediational tools are intentionally and overtly introduced to the individuals, as opposed to “implicit mediation” which occurs when the mediational means is already part of an activity and, therefore, does not need to be intentionally injected into the activity (p. 180).

Mediation emphasises active contribution of artefacts and human mediators in the learning process which leads to active and purposeful engagement of the learners, while scaffolding is “related to the technique of mediation” (Kozulin, 2003, p. 20). Whereas scaffolding is sensitive to task difficulty and withdrawn when relative independent task performance is reached (Wells, 1999), mediation is semiotic and related to psychological functioning (Wertsch, 1985).

Sociocultural theory emphasises the important role of the instruction and the instructor in mediating systematically organised learning for learners’ development (Kozulin, 2003). “This development results from the teacher’s guidance, because he or she is instrumental in presenting the learning task and the knowledge and skills to be learned” (Haenen, Schrijnemakers & Stufkens, 2003, pp. 249-250). The role of explicit mediation with regard to cultural models or practices is apparent in Vygotsky’s view on spontaneous and scientific concepts.
2.1.1.4 Spontaneous and scientific concepts

According to Vygotsky (1986), spontaneous and scientific concepts, though differing in source and nature, are “parts of a single process” which forms human thinking (p. 157). Vygotsky views spontaneous concepts as those which can be acquired following unstructured social experience in everyday life. Scientific concepts, on the other hand, are formed through formal instruction. Scientific concepts subsume four distinct characteristics: “generality, systemic organization, conscious awareness and voluntary control”, the last two of which directly reflect the formation of higher mental functions (Wells, 1994a, p 1).

According to the above characteristics, scientific concepts belong to a group of concepts collectively forming a larger conceptually organised category; for instance, a word is part of a larger system of language. Spontaneous concepts, on the other hand, are grouped according to appearances or mechanical characteristics. In addition, unlike spontaneous concepts which may be grasped simply by experiencing, the acquisition and mastery of scientific concepts, that are more structured and generalised in form, must be assisted by systematic instruction. For example, learning to write in any language is not an ability that emerges spontaneously and must be taught systematically.

Being able to generalise and acquire system thinking is vital to the formation of scientific concepts. Vygotsky believes that systematic conceptual thinking or thinking in scientific concepts occurs through formal instruction. “In the context of school learning, academic concepts are called scientific, not because their contents are scientific, but because they are systematically learned” (Haenen et al., 2003, p. 250).

Without formal instruction, elementary understanding of relationships between objects is formed first as heaps where several elements are grouped together without any rational explanation. This stage is followed by relating objects in terms of complexes based on horizontal and physical connections or associated features. “In a complex, the bonds between its components are concrete and factual rather than abstract and logical” (Vygotsky, 1986, p. 113).

Next, a pseudoconcept appears when a child adopts a concept from an adult but does not fully understand the concept. Pseudoconcepts “are similar to concepts in their appearance, but differ substantially in their essence” (p.120). That is, they do not enter
into a system in relation to other real concepts. Derived from the child’s thinking as complexes, pseudoconcepts are used without true conceptual understanding or generalisation.

When the child learns to judge, abstract and generalise, a real concept emerges. Vygotsky (1998) contends that “thinking in concepts is a new form of intellectual activity” (p. 40). Concepts cannot be prescribed in a ready-made form by the teacher, nor can they be directly transferred from the teacher to the learner. Concepts cannot be memorised “but evolve with the aid of strenuous mental activity” of the learners (Vygotsky, 1986, p. 157). More importantly, they must undergo transformation and reformulation; they become more systematic and generalised. They must also be given their place in relation to other concepts of the same category and become abstracted and inducted into a larger system of theoretical thinking.

2.1.1.5 Self-regulation

From a sociocultural perspective, self-regulation is regarded as a form of higher mental function with its genesis in social interaction. Depending on the source of control, regulation is discussed in terms of object-regulation, other-regulation and self-regulation (Wertsch, 1979, p. 90). These three types of regulation are associated with L2 learning (Lantolf & Thorne, 2007). Learners’ mental activities can be regulated by (a) objects, (b) scaffolding through assistance and direction given by others, and (c) self-regulation. Being regulated by objects or directive guidance of others, learners complete their activity by relying on external assistance. For instance, a child learns to write in a straight line on a ruled paper or write down a correct spelling dictated by the teacher. Following internalisation, self-regulation appears on the intra-psychological plane and the activity is completed with minimal or no external assistance. As the individuals’ self-regulation increases, their behaviour becomes less regulated by objects and others (Lantolf, 2000). According to Frawley and Lantolf (1985), self-regulation “is not absolute” but “a relative phenomenon” (p. 20) and should not be viewed as an all-or-nothing-age-specific capacity (DiCamilla & Antón, 2004). Learners can be self-regulated in certain aspects of task and may still benefit from scaffolding assistance from more knowledgeable peers in other task aspects (Aljaafreh & Lantolf, 1994). In addition, through “the principle of continuous access”, adults do not rely on self-regulation exclusively but continue to benefit from object- and other-regulation (Frawley & Lantolf, 1985, p. 22).
Self-regulation is metacognitive (Bråten, 1991). It is “akin to what in modern jargon is called metacognition, and incorporates such functions as planning, voluntary attention, logical memory, problem solving and evaluation (Lantolf & Appel, 1994, p.3). Self-regulation encompasses goal-directed psychological and cognitive functions, and denotes the individuals’ “increasing capacity to formulate plans of action, master and control their own behaviour, verbalizing their plans and goals, generalizing skills to new situations and, in sum, learn how to communicate and think” (Harvard, 1996, p. 42). McCaslin and Hickey (2001) suggest researchers may aim to “enhance the development of self-regulated learning for the purpose of individual empowerment by promoting self-direction and planfulness” (p. 237). To promote self-regulated learning means to promote students’ metacognitive learning behaviour.

A word is needed here to situate self-regulation in the larger context of second language learning discussion on metacognition. Flavell (1979) defines metacognition as “knowledge and cognition about cognitive phenomena” (p. 906) and refers to metacognitive knowledge as “that segment of stored world knowledge that has to do with people as cognitive creatures and with their diverse cognitive tasks, goals, actions, and experiences” (p. 906). Paris and Winograd (1990) regard metacognition as “knowledge about cognitive states and abilities that can be shared among individuals while at the same time expanding the construct to include affective and motivational characteristics of thinking” (p. 15). Further, metacognition is taken to be “higher order thinking which involves active control over the cognitive process engaged in learning” (Livingston, 2003, p. 2).

The notion of metacognition indicates the reflective and regulatory properties of one’s knowledge, awareness and action, and the role of active engagement of an individual in completing a purposeful cognitive operation (Flavell, 1979; Livingston, 2003). This notion resonates well with the fact that SCT self-regulation presupposes human conscious attention and deliberate action as opposed to simply responding to stimuli in the environment. Sociocultural theory stipulates that language is a semiotic tool of thought and emphasises the role of private speech for self-regulatory purposes.

2.1.1.6 Private speech

Sociocultural theory emphasises the importance of language in all human interaction. Vygotsky (1978) contends that there are two forms of language: social
language which serves communicative purposes among people, and self-directed
language or private speech which plays a regulatory role in the mind of individuals and
enables them “to overcome impulsive action, to plan a solution to a problem prior to its
execution, and to master their own behaviour” (p. 28). SCT-based research posits that
private speech progressively becomes abbreviated, drawn inward and turned into inner
speech which facilitates self-regulatory human thinking, reflecting the genetic law of
human intellectual and self-regulated capacity. McCafferty (1994a) notes, “being
principally involved with the higher mental functions such as planning, guiding, and
monitoring, the primary domain of private speech is metacognitive” (p. 429). Private
speech or speech directed at self is regarded primarily as a psychological tool for problem-
solving and self-regulation.

Private speech is a precursor of inner speech; self-regulatory private speech
that “when language operates as an internal mechanism supporting and mediating
thinking, it becomes inner speech. Inner speech, an essential instrument to verbal thought,
is not a biological given; it has its origin in social, external language” (p. 90). Van Lier
(1996) observes that “language and cognition are interdependent processes” (p. 4). This
is evident as private speech does not disappear completely; rather it tends to appear and
reappear particularly when learners are facing cognitively demanding tasks and seek to
regulate their cognition. Self-directed speech “increases and is more persistent every time
the situation becomes more complicated and the goal more difficult to attain” (Vygotsky,
1978, p. 25). Speech reorganises human thinking and regulates cognition during problem-
solving activities. In what follows, I present key SCT studies in which private speech is
used as a self-regulatory tool.

2.1.1.7 Studies on private speech

In this section, pioneering studies on private speech of adult learners are presented
in three main categories, i.e., studies on (1) private speech first contextualised in social
interaction (Aljaafreh & Lantolf, 1994; Donato, 1994; Swain & Lapkin, 1998), (2) private
speech of learners of high and low proficiencies (Appel & Lantolf, 1994; Frawley &
Lantolf, 1985; McCarfferty, 1994b), and (3) private speech in problem-solving by
individual L2 learners (Centeno-Cortés and Jiménez, 2004).
2.1.1.7.1 Private speech during collaborative discussion

Private speech during collaborative dialog was examined by Aljaafreh and Lantolf (1994) who investigated the effects of negotiated feedback on grammatical development of three L2 learners from Japan, Spain, and Portugal. A one-to-one negotiated error correction session began with learners independently examined their own writing before discussing their paper with the tutor. Explicit feedback occurred when the tutor provided corrective patterns on which learners relied, while implicit feedback was given in the form of prompts to scaffold learners’ more-or-less independent correction. The study revealed that learners in different ZPDs required different levels of assistance and that implicit feedback or prompts appeared more effective when learners demonstrated greater level of self-regulation. The authors described five developmental stages from other-regulation to self-regulation. The first, second and third stages reflected learners’ gradual progress from not noticing and noticing but not able to correct to being able to notice and correct the errors with the help of the tutor. The fourth level saw learners correcting errors with minimal external help. And at the fifth level, corrective behaviour was fully self-regulated. The authors emphasised the graduated and contingent nature of scaffolding in which the tutor gradually withdrew the level of support from explicit to implicit feedback allowing learners to operate within their actual and potential developmental zones. This seminal SCT study demonstrated how individual learning and development could be effectively mediated by speech and interaction.

Research demonstrates that social language is later adopted as private speech. Donato (1994) investigated speech during peer discussion as a form of scaffolding among three university L2 learners of French during a planning stage of a speaking task. Findings revealed that learners were able to focus on both meaning and accuracy when scaffolded by collaborative problem-solving. While learners worked collaboratively, their ‘combined expertise’ in linguistic knowledge, demonstrated in increased accuracy in shared language use, served to scaffold their independent knowledge. Almost half of the verbal instances formed through shared efforts during collaborative work were later applied independently by the individuals who self-scaffolded through private speech. The initial peer-scaffolding mediated by speech was also viewed as a form of mutual other-regulation which later served as a means to promote self-regulation.
Speech during interaction has also been examined by Swain and Lapkin (1998) who investigated a dialogue between two teenage French immersion learners collaboratively constructing a short narrative text. Each learner had a set of pictures on which a story could be based, provided that the student could get the other half of the information from the other student. The authors found that speech acted as a mediational means for both communicative language use and cognitive language learning, as demonstrated in language-related episodes (LRE), defined as “any part of a dialogue where the students talk about the language they are producing, question their language use, or correct themselves or others” (p. 326). Learners hypothesised, tried out, evaluated and drew conclusions and judgment on alternative linguistic items before applying these items in their writing.

The use of speech is also emphasised in various collaborative learning opportunities to mediate learning of students within their ZPDs (Donato, 1994). Likewise, for Antón (1999), classroom discourse between the teacher and learners represents a form of effective scaffolding using language as a semiotic tool for mediation. Both views are reiterated by Lantolf and Thorne (2006) who believe the ZPD concept embodies both the notion of assisted performance and the view of prospective achievement. Similarly, research on ZPD also interests Guk and Kellogg (2007) who argue that, collectively, teacher-led and student-led interactive activities create a “whole class ZPD” comprising two aspects of ZPD: (a) inter-mental mediation and assisted performance within “the upper end of the ZPD” which concerns itself mainly with students’ attending to semantic and syntactic language items scaffolded by the teacher, and (b) intramental or a lower and unassisted end of ZPD “bordering on internalization”, where learners use private speech to talk to themselves and begin to draw new knowledge inward (p. 297). In both cases, language development is mediated by speech.

Private speech, particularly during teacher-learner interaction and peer collaboration, has been empirically validated to improve self-regulation and language learning performance. Ohta (2001) investigated private speech of seven adult native English speakers learning Japanese and found that significant use of private speech occurred when learners needed to direct their attention to particular language aspects during interaction with the teacher. Similarly, DiCamilla and Antón (2004) analysed eight sets of recorded verbal data of English-speaking college learners of Spanish during their collaborative Spanish composition activities and found two major aspects of how
learners used private speech. One was reported to enable learners to metacognitively and specifically direct their attention on the task at hand during a crucial moment in which concentration was most needed. The other was said to be that of psychological distancing whereby learners deliberately wanted to separate or dissociate themselves from direct task involvement and retreated into their personal zone in order to regain control over tasks. It was concluded that although private speech may appear at times to be social or communicative, it essentially served personal and psychological purposes and was used only by the person uttering it.

Research also shows that private speech may be associated with language proficiency and task conditions. McCafferty (1994b) analysed private speech of 39 adult ESL learners completing a picture narration task. Participants were assigned into a low intermediate group and a high intermediate to advanced group. McCafferty found that learners with high proficiency used less private speech than did those with lower proficiency, who used twice as many regulatory utterances with twice as much object-regulated private speech than did speech used by advanced learners. The findings supported Vygotsky’s assertion that the use of private speech reduces as learners gain control over a task. The author also noted that task content and task type (individual or group work) could impact participants’ private speech and that their cultural background and L1 might have influenced the frequency of private speech as Hispanic subjects produced significantly more instances of private speech than did Asian subjects.

2.1.1.7.2 Private speech of learners of high and low proficiencies

Research indicates that advanced L2 learners use similar private speech as do native speakers. Frawley and Lantolf (1985) examined private speech of intermediate and advanced adult ESL students as well as children and adult native English speakers completing a narrative task based on six drawings presented sequentially. The authors found that intermediate learners, being the most object-regulated of the four groups, in an attempt to gain control over task, produced more private speech naming characters and discretely describing visual stimuli frame-by-frame, fragmented and devoid of narrative cohesion than did advanced learners and adult native speakers. With relatively high English proficiency, advanced learners and English speaking children demonstrated both object- and self-regulation, produced similar private speech and adopted a narrative story line using narrative openings, reference, tense and aspect with little frame-by-frame
disconnected discourse, while adult native speakers, being the most self-regulated group without linguistic constraints, produced the most comprehensive narration with minimal frame-by-frame description. Additionally, young native speakers’ speech was similar to that of intermediate ESL speakers; both groups resorted to externalised macrostructural features such as “I see” and “We saw” in an attempt to gain control over the task (p. 27). Frawley and Lantolf rejected the view that second language discourse is characterised by errors as commonly regarded in the native/non-native dichotomy, and considered all private speech of language learners as “a conscious strategy on the part of the producers to control their knowledge of the verbal production from without, rather than from within” (p. 22).

Another comparative study was by Appel and Lantolf (1994) who investigated how L1 and L2 advanced speakers/readers of English benefited from speaking components of their recall tasks. The study revealed that private speech assisted both L1 and L2 readers in task-orientation, defined in this study as learners’ task interpretation and the types of goals, plans and methods they set in order to carry out the tasks. The authors believed task orientation influenced learners’ strategy choice. Oral recall protocol data revealed two forms of task-orientation: the internal orientation process of planning and execution, and the external re-orientation strategies used during tasks as observed through verbal protocols. The authors noted that while “internal orientation” occurring intramentally was usually the first activity learners undertook as they approached tasks, it did not necessarily follow that this orientation was applied throughout task performance, and that “the more difficult the task, the more fully the inner speech is externalized as private speech” (p. 438). When facing difficulties during reading learners resorted to directing their attention to particular text segments and comprehension monitoring strategies were revealed as readers negotiated lexical items in order to complete the referencing pairs and fix comprehension breakdown. When comprehension was achieved, verbalisation served as planning for successful task performance, whereas when reading did not result in full comprehension, speaking, together with planning, was “first and foremost directed at understanding the text” (p. 441) and “the more difficult a task is for a speaker, the more likely it is that macrostructures [summaries or gist] are externalised and thus appear in protocols” (p. 443). The authors proposed that creating coherent mental representation of text, in other words, comprehension, did not necessarily occur while text was being read or immediately as reading finished. As shown in this
study, readers came to understand text as they communicated with themselves through private speech which helped them negotiate and reconstruct meanings and eventually achieved their comprehension.

2.1.1.7.3 Private speech of individual learners

Private speech is found to assist learners in managing task demands and frustration. Centeno-Cortés and Jiménez (2004) examined private speech of six native speakers, six L2 intermediate and six advanced learners of Spanish. Completing the task alone, each participant was video-recorded as they answered questions on a web page. The researchers categorised five strategies employed via private speech: repetition, rising intonation, pause fillers, self-encouraging comments, and deictic elements for instance naming or identifying instances. They also noted private speech such as exclamations of frustration and self-criticising comments. Findings revealed that native speakers used only L1 private speech mostly while not reading, that L2 learners used both English and Spanish, and that advanced learners used private speech more during logical reasoning than did intermediate learners who made more metacomments and used repetitive speech during reading. The study supported the findings by Frawley and Lantolf (1985) that native speakers demonstrated higher level of self-regulation than did L2 learners who tended to be more object-regulated and relied on describing and reading from material given.

So far, this subsection has presented the concept of self-regulation and reviewed related studies in which private speech is a strategy for self-regulation. To reiterate, self-regulation, derived from culturally organised practice aided by artefacts and others, encompasses the conscious intention to act as well as the ability to plan, focus on specific task demands and monitor one’s action. Sociocultural theory posits that all human intellectual endeavours are influenced by social realities mediated by speech and interaction, and the use of speech as a metacognitive strategy is aimed at mediating internalisation and self-regulation (de Guerrero & Villamil, 1994). More specifically, learners use private speech and inner speech to regulate their thoughts and actions. As well, they use self-talk to aid their understanding of what they have learned socially and culturally (Donato, 1994). Following this language-based internalisation, direct attention and conscious intention begin to take shape and gradually become part of learners’ self-regulation (Vygotsky, 1978; Wertsch, 1979). From a pedagogical perspective, verbal self-
regulation manifests itself in learning behaviour reflecting “how individuals come to be able to initiate, sustain, and modify voluntary acts” (Harris, 1979, p. 68). As well, the use of private speech and inner speech reflects “the culmination of the internalization of social speech, a process which involves the transformation of a social, communicative, symbolic tool into a private instrument for thought mediation and intrapersonal communication” (de Guerrero, 2004, p. 91).

Essentially, self-regulatory private speech is a strategy. Donato and McCormick (1994) regard strategies as mediational means facilitating conscious actions and define learning strategies as “actions motivated by specific goals” (p. 455). The important concept here is that strategy use presupposes conscious goal setting; strategies are carried out in relation to goals. From a sociocultural perspective, goals are discussed with reference to activity theory.

2.1.2 Activity theory

This section discusses the concept of activity theory, drawing on its sociohistorical root originally from the work of Russian scholars and detailing the transformation from its earlier conception to its current application. According to Engeström (1999), literature on activity theory can be conceptualised in three phases grounded mainly in the work of Vygotsky (1978), Leont’ev (1981), and Engeström (1999) respectively. These three generations of activity theory are presented as follows.

2.1.2.1 Vygotsky’s concept of activity

Vygotsky (1978) builds his activity concept around the earlier work of Marx (Wertsch, 1981), whose concept of activity encompasses human agency, labour and the use of tools (Engeström, 1999). The key principle of Vygotsky’s idea of activity is historicity, that is, “historical changes in society produces changes in “human nature” (consciousness and behaviour)” (Cole & Scribner, 1978, p. 7). Within this cultural-historical framework, all human activities are situated in the social milieu in which multiple cultural, social, historical and personal forces are actively in operation. Vygotsky (1978) focuses on the dynamically interrelated relationship between man and tools and symbols in practical activity, and emphasises the capacity, unique to human, to use language to self-regulate. Vygotsky is also credited with introducing speech as instrumental to the meaning making aspect of all human activity (Wertsch, 1981).
2.1.2.2 Leont’ev’s concept of activity

The second phase of activity theory is seen through Leont’ev’s (1981) work which differs somewhat from that of Vygotsky. While Vygotsky focuses heavily on cultural-historical origin as the root of human activity ontology in terms of “the mediation of mind and consciousness” by culture, Leont’ev concentrates on mediation by tools and other objects in human activity (Zinchenko, 1995, p. 41). Leont’ev (1981) writes: “Internal activity, which has arisen out of external, practical activity, is not separate from it and does not rise above it; rather, it retains its fundamental and two-way connection with it” (p. 58). This being the case, activity theory is concerned with how an individual’s internal world is connected to the external social world through his/her goal-driven and tool-mediated activity.

According to Leont’ev (1981), human activity cannot be fully understood outside its contextual system. While scholarly interest may sometimes be focused on an activity of a person as an individual, “however, if we removed human activity from the system of social relationships and social life, it would not exist and would have no structure” (p. 47). As the sociocultural environment in which an individual operates gives his/her activity system its life and its context, a particular activity of a particular person must be investigated in relation to the world surrounding that individual. Leont’ev conceptualises activity theory as a system animated by three interdependent components of motives, actions and operations, all of which form a hierarchical structure of activity. Leont’ev emphasises that motives, actions and operations are inextricably linked and must be viewed in light of one another. These three constructs are discussed below.

The first key construct is motives. Leont’ev (1981) conceptualises motives as “the motivational sphere of consciousness” (p. 59). Motives are the drives behind human activity and are conscious as they give directions to activity, which means they require a level of awareness of a person carrying out the activity. Speaking of motives as desires, Leont’ev differentiates natural or biological desire which is “a state of need for the organism” from “desire as a factor that guides and regulates the agent’s concrete activity” (p. 50). Regulatory functions of desires or motives only arise following the subject’s objectification of the desires “drawn from the surrounding world” (p. 50). As well, the motive[s] of a particular activity determines what needs to be maximised or ignored (Wertsch, 1985). Motives are thus socially derived and are closely connected to human
needs or what is deemed important in satisfying the balance of the immediate environment in which cultural, social, historical and personal forces are at play. These forces make up activity systems of which the driving engine is the motives of the individuals (subjects) within those systems. Lantolf and Thorne (2006) define motives as “the cultural-psychological-institutional impetus that guides human activity toward a particular object” (p. 223). Objects are the targets to be achieved through actions.

The second construct is actions. Actions or “the processes subordinated to conscious goals” (Leont’ev, 1981, p. 65) refer to actual realisation of objects through practical and physical engagement, aided by tools under certain conditions or procedures, and are projected towards and regulated by goals on which the basis of the actions is formed. That is, human activity is energised by motives, and, driven by these motives, the activity is activated, mobilised and realised through a series of goal-directed actions mediated by cultural artefacts (Lantolf & Thorne, 2006). Goals are considered conscious as they can be kept in mind at the level of action (Leont’ev, 1981). Goals are directive and evaluative as they are used to guide actions and to assess performance outcomes. Also, goals are situated and unstable as they are specifically formed in relation to specific contexts and actions and they can be extinguished even before the target outcomes are achieved (Lantolf & Appel, 1994).

The third construct is operations. Operations are well-practised, automatised or routinised actions often completed without conscious attention (Leont’ev, 1981). Operations are also conceptualised as conditions under which actions take place. Actions are operationalised under the conditions which may or may not be conducive to a person’s realisation of goals. These conditions can be made more facilitative by the use of tools which are crucial in mediating actions and goals.

2.1.2.3 Engeström’s concept of activity

More recently activity system has been reconceptualised in the work of Engeström (1987; 1999) who characterises activity theory as consisting of six key sub-constructs – object (relating to goals), subject (participant or actor), tools (mediational means), community (sociocultural environment and its members), rules and division of labour (allocation of tasks and resources determined by power structures and relationships). The structure of an activity system (Engeström, 1987, p. 78) is shown next.
Engeström (2001) proposes five key concepts encompassing main characteristics of activity: (1) activity as a collective unit, that is, activity systems do not evolve on the basis of motives alone. Tools and artefacts mediate the relationship between the subject and object, and the interaction between the object and the community is mediated by the division of labour among community members; (2) multivoicedness underscores the importance of the role of the subject or the individuals as well as the social and interdependent aspects of the relationships/interactions between the individuals and other individuals and between the individuals and their environment; (3) historicity denotes the role life histories in shaping learners and making them who they are; (4) contradictions or tensions at various levels between various elements within and outside activity systems, and; (5) expansive transformation which occurs when the activity positively transcends itself and leads to qualitative change and new activities.

Engeström (1987) describes four possible levels of contradictions in an activity system. First, primary contradiction refers to a conflict or tension within or between the same constituent element(s) in an activity system. For instance, a subject may hold two conflicting goals. Next, secondary contradiction refers to tension between different elements in an activity system. For example, a subject’s goals and motives may be congruent but the tools to realise these goals may not be available. Third, tertiary contradiction occurs as the activity system evolves over time particularly when new practices are introduced into an existing activity system resulting in “a contradiction between the object/motive of the dominant form of the central activity and the object/motive of a culturally more advanced form of the central activity” (p.89). Finally,
quaternary contradiction refers to dissonance between different activities. For example, an L2 learner may struggle with the concept of writing in a new learning context following conflicting L1 and L2 conventions.

So far, this section has presented the ontogenesis of activity theory described from the sociohistorical perspective in a timeline punctuated by three unique yet closely connected conceptualisations. Informed by the three generations of activity theory, the present study adopts Leont’ev’s activity framework. Next, this framework is discussed in relation to L2 learning.

2.1.2.4 Viewing L2 learning through an activity theoretical lens

With regard to L2 learning activity, Lantolf and Pavlenko (2001) contend that language learners come to class with their mind conditioned by their cultural experience, educational background, personal perception of learning, and view of the world - all of which have been shaped by their societal, institutional, family and personal expectations inherent to a particular learning context. Lompscher (2000) notes that an understanding of learners as social beings and of cognition as a socially developed construct may contribute to meaningful teaching and learning.

Meaningful learning does not happen incidentally. Vygotsky (1998) contends that such learning is carried out by learners with “an understanding of the structure of the situation” (p. 236). This means learners must understand the value of what is being taught (Lantolf & Thorne, 2006). In learning activities, this understanding highlights the notion of “intersubjectivity” defined as “the degree to which interlocutors in a communicative situation share a perspective” (Wertsch, 1998, pp. 111-112), that is, the inherent purposes and intended goals are shared between the learners and more knowledgeable persons. It is thus important that the learning concepts and instructional materials are well explained so that learners are aware of the learning purposes, contents and the role of instructional materials in activity.

Intersubjectivity is achieved when the learners’ goals coincide with the teaching purposes and learning outcomes. This, however, is not always the case. Learners come with their own histories, perspectives and goals which may not match those of the teacher (Roebuck, 2000). Therefore, intersubjectivity or the alignment of pedagogical goals and learners’ personal goals cannot be taken for granted. Even learners completing the same
task may perform different activities (Coughlan & Duff, 1994). The authors refer to “task” as a predetermined set of descriptive behavioural guidelines given to participants from whom researchers hope to draw data, and define “activity” as “the behavior that is actually produced when an individual (or group) performs a task” and as “a process as well as the outcome, of a task, examined in its sociocultural context” (p. 175). Coughlan and Duff point out that the ‘behavioral blueprint’ prescribed by researchers is not necessarily the same as and not always fully reflected in the activities or actions actually performed by participants attempting to complete the same task. Lantolf (2000) points out that it is not easy to determine any given activity at all levels as not all elements within the activity are observable. Adding to this view, Lantolf and Pavlenko (2001) contend that whatever goals a person is contemplating in his/her mind and the action(s) eventually taken by that person are seen as closely linked. Furthermore, goals may also reflect an individual’s intention to resist changes introduced into their activity system, and therefore a person may choose to take some specific actions and not others (Wells, 2002).

From an activity theoretical perspective, one issue relevant to L2 learning in this thesis is the role of self-directed speech. Wells (2007) points out that activity theory has not explicated the role of discourse in activity, and raises the question “How should we theorize the relationship between discoursing and the forms of joint activity in which it occurs?” (p. 160). Wells focuses mainly on oral discourse among participants and calls for more detailed investigation to enrich scholarly understanding of the role of language from an activity theoretical perspective. He also proposes that “the production of discourse is usually automatic and in the sense of not requiring conscious attention, . . . , it seems that it should be treated as an operation” (p. 163). According to Wells (2007), at the level of operation, a mediational means becomes most effective as it is not likely to cause any distraction. Wells’ conceptualisation of discourse within activity is of interest to this study of which the focus is the inclusion of verbalisation as a key mediational means into writing activity.

In summary, activity theory stipulates that human activities are goal-directed and tool-mediated. Activities can be examined at three hierarchical levels of activity, action and operation (Leont’ev, 1981). Activity is defined by its motives, action is defined by goals, and operation is defined by the conditions. As “humans have access to the world only indirectly or mediately, rather than directly or immediately” (Wertsch, del Rio, & Alvarez, 1995, p. 21), the concept of tool mediated and goal-directed actions is important
to the understanding of the learning activity in a classroom. Lantolf and Pavlenko (2001) contend that activity theory "compels the researcher to intervene in communities of practice" and one form of this intervention is the informed choice of teaching method and the introduction of particular tools to mediate learning activities (p. 157). The choice of sociocultural pedagogical approach and the use of instructional materials specifically designed as mediational tools for language learning are of particular interest to the present study and will be discussed in full under Systemic Theoretical Instruction next.

2.1.3 Systemic Theoretical Instruction (STI)

In this section, Systemic Theoretical Instruction (STI), a key STC pedagogical adopted in the present study, is discussed in three parts. First, the historical background and key pedagogical features of STI are presented. Next, STI-based research is reviewed. And lastly, the gap in the literature is identified.

2.1.3.1 The historical background and key pedagogical features of STI

The theoretical framework underlying key pedagogy in the current investigation is inspired by the work of Gal’perin (1969). Gal’perin’s Systemic Theoretical Instruction (STI) builds on Vygotsky’s idea that cognition is mediatedly developed following internalisation of cultural artefacts through social interaction. Gal’perin’s research endeavour stems from this theoretical position and succeeds in establishing procedural and structural aspects of the internalisation process. Gal’perin’s work illuminates the process of internalisation first conceptualised by Vygotsky (Lantolf & Thorne, 2006).

Although Vygotsky conceptualises internalisation as vital to learning and development, he has not mapped out how internalisation might occur from a pedagogical perspective (Johnson, 2008). Furthermore, Vygotsky argues that the formation of scientific concepts could not be achieved without formal instruction. Vygotsky’s work, however, does not include a detailed account of how cultural tools could be used in quality instruction. Moreover, Vygotsky has not specified how his concept of ‘learning which leads to development through internalisation of scientific concepts’ could be operationalised in a real classroom.

Following Vygotsky’s idea, Gal’perin extends the notion of internalisation of exogenous cultural behaviour as a key factor to human development (Haenen, 1993). According to Gal’perin, the internalisation process is powered by the orienting function
of cultural tools and learners’ intention. The orienting function encompasses the regulatory quality both of cultural tools over the human mind engaging in object-regulated activity and of the human mind over self and tools engaging in self-regulated activity. For Gal’perin, “the basic function of mind is to orient a person’s future actions” (Haenen, 1993, p. 78). The concept of orientation also relates to the concepts of internalisation. Whereas the orienting function of tools may feature strongly prior and during the process of internalisation, the orienting function of the mind over self, tools and others, on the other hand, only emerges following internalisation and subsequent externalisation in future experience for self-regulatory purposes.

According to Gal’perin, human experience rests on two interdependent intra-mental spheres: the “objective-conceptual” sphere of knowledge itself and the sphere of “individual orientation” or the operational aspect of the mind, in which the knowledge guides and regulates human functions in the outside world (Negueruela, 2003, p. 89). “For Gal’perin, orientation is a psychological function that allows human beings to understand and organize their daily activity. The mind has this planning and problem solving function (‘orienting’) that regulates consciousness and is essential in daily functioning” (Negueruela, 2003, p. 96). Gal’perin focuses on tool-mediated action, interaction and instruction as the basis of mental formation, and succeeds in situating cognitive development in sociocultural theoretical framework (Arievitch & Haenen, 2005).

Gal’perin (1969) conceptualises a model of how an abstract concept residing outside a human mind could, through several stages, become internalised and transformed. Gal’perin’s explanation of such transitional and transformational stages, nevertheless, does not imply linear progression or retrogression of these stages (Negueruela, 2003). The stages of mental formation are interdependent and recursive. As well, Gal’perin’s stage-by-stage mental formation emphasises the dialectic and transformative nature of the interdependence between the two planes (Arievitch, 2003). Once internalised, external actions become mental actions integral to the intrapersonal plane of human consciousness. “This plane enables humans to act with symbolic substitutes of objects without those objects being physically present” (Arievitch, 2003, p. 285). In other words, the learning concept has been internalised and subsequently “performed in abstraction from the physical situation” (p. 286).
As the mind does not lend itself to direct observation, mental functions are approximated from observable outwardly performed actions. In examining these actions, Gal’perin focuses on four parameters of an action. These are (1) level of appropriation (2) degree of generalisation, (3) degree of abbreviation, and (4) degree of mastery (Haenen, 1993, p. 99). A brief discussion on these parameters is as follows.

(1) **Level of appropriation** or **abstraction** (Arievitch & Haenen, 2005) is distinguished at material, verbal and mental levels, from lower to higher level respectively. Materialised action denotes object-regulation. Verbal action denotes oral ability to articulate what the action entails. Finally, mental action designates intramental execution of an action. These three levels of appropriation vary in terms of their generalisation, abbreviation and mastery.

(2) **Degree of generalisation** denotes learners’ ability to differentiate essential from non-essential properties of an action and to apply only what is necessary for action completion.

(3) **Degree of abbreviation** designates how abridged an action has become in relation to its fully-fledged execution.

(4) **Degree of mastery** signifies automatisation of an action following full internalisation.

As well as the above parameters of an action, Gal’perin (1967) stipulates three functional dimensions of an action, i.e., **orientation**, **execution** and **control**, which form the framework on which an action can be observed (Poehner, 2008). First, **orientation** refers to an initial stage prior to an action being carried out, whereby a person begins to volitionally envisage the task requirements, consider available resources, anticipate problems, activate prior knowledge and select strategies. Gal’perin (1967) refers to this function as “the objective purposive structure of the action” (pp. 32-33). Second, **execution** occurs during the actual performing of an action which may or may not directly correspond to its logical orienting basis as a person “acts according to this logic only insofar that he is oriented to it” (p. 33). And third, following the action and ideally throughout the course of an action, a **control** function evaluates task performance. To this end, Gal’perin emphasises that “consciousness is a particular form of controlling the subject’s action, and the logic of action itself implemented by the subject only to the
extent that it is, and because it is, recognized” (p. 33). Orientation may take over when task demands override automatization of an action. Furthermore, in abbreviated actions, not all components of the orienting basis are instantiated, although these components contribute to task understanding overall (Gal’perin, 1967). Negueruela (2003) suggests that orientation, execution, and control functions of an action do not exist in a linear successive fashion in STI-informed concept-based instruction and learning.

In a learning context, left to their own devices, learners may not be able to effectively attend to orientation, execution and control of their own actions. Because learners may not have a complete orienting basis to guide the actual execution of an action and they may lack the ability to control and monitor their own performance, learning is inevitably interspersed with trials and errors. To avoid wasteful attempts from the learners’ part, Systemic Theoretical Instruction (STI) proposed by Gal’perin serves to ensure maximum learning outcomes.

In elaborating on Vygotsky’s notion of internalisation, Gal’perin emphasises the SCT recognition of the significance of cultural tools and their mediational role in human development. The dialectical relationship between the development of mental functions and tools becomes illuminated in STI pedagogy through its focus on introducing conceptual knowledge to learners (Haenen, 1996). In linking the tool-mediated mind notion to pedagogical practice, Gal’perin’s STI also reflects Vygotsky’s idea of conscious learning of scientific concepts. Having stated that a specific type of instruction is required in order to provide the type of learning that will lead to development, Vygotsky does not elaborate what such instruction might encompass. Gal’perin (1969) expands on this Vygotskian instruction-learning-development relationship and spells out how a learning process may be set out methodologically (Arievitch & Stetsenko, 2000).

In essence, STI pedagogy aims to promote the type of learning as described in the progression of Vygotsky’s (1978) genetic law which states that the development or the formation of human higher mental functions appears twice: first in the social realm and, once internalised, in the intrapersonal realm. The key concept of STI is, thus, built on the process of internalisation and tool-mediated conscious learning. Also, Gal’perin stipulates that a concept can only be successfully internalised through the use of verbalisation and emphasises the significant role of speech as a semiotic tool for human psychological development. Following the conceptualisation of the relationship between
the human mind and its functions through the use of tools, STI-based teaching places its instructional emphasis on concept-based instruction through the use of particular tools systematically designed and introduced through explicit instruction encompassing demonstration, explanation and guided rehearsal (Negueruela, 2003).

According to Gal’perin (1969), the formation of mental activity rests upon six stages. Viewing mental formation essentially as orienting activity, Gal’perin develops a six-stage model of mental action. These stages are (1) motivational introduction, (2) task orientation, (3) material performance, (4) audio speech, (5) private speech and finally (6) inner speech completely in mental form. Haenen (2001) contends that these stages may not necessarily occur in sequence. Pedagogically, these six stages can be grouped into three major areas on which classroom instruction can be based. From a practical instructional point of view, STI comprises three key components or stages: the unit of instruction, materialisation, and verbalisation. These are “the three cornerstones of this approach” (Negueruela, 2003, p. 130).

2.1.3.2 The three main components of STI

2.1.3.2.1 The unit of instruction

In the first stage, motivational introduction and task orientation are translated into the components of unit of instruction. Motivation is promoted by drawing learners’ attention to the learning purposes before introducing the conceptual content and method of learning which must be directly related to learning activity and learners’ motivation (Talyzina, 1981). Following the motivational and orienting stages, STI-based teaching aims to minimise trial-and-error learning by providing learners with a materialised conceptual scheme. The orienting scheme discussed below captures all essential elements of a given learning concept and is presented in material form visually available to learners (Negueruela, 2003).

2.1.3.2.2 Materialisation

The second stage of the six-stage model of mental action is performing a task through materialisation. This pedagogical feature is realised through the use of a schema of complete orienting base of action (SOAc) (Ga’perin, 1989) or a scheme of complete orientation basis of action (SCOBA) (Gal’perin, 1982) presented in a didactic model or diagram designed to direct learners’ attention to specific tasks or concepts. The schematic
A SCOBA provides a schematic framework of the concept being taught. Learners’ comprehension of the concept is aided when they interact with the SCOBA which serves as a visual and semiotic tool. As a schematic representation, the SCOBA is concrete and tangible, compared to the original abstract concept. It “provides external auxiliary support (i.e., mediation) of the internal mental activity” in terms of “visualisation”, that is something learners can actually see (Lantolf & Johnson, 2007, p. 882).

Key characteristics of the SCOBA include core components of the concept being presented, highly relevant scaffolding stages through decision making, and task-related problem-solving sub-processes. As well as being a tangible orienting tool in terms of Gal’perin’s idea of materialisation of a concept, the SCOBA should also be self-explanatory. While a concept represented in the SCOBA is usually complex, the very objective of producing the SCOBA is to reduce the degree of conceptual complexities, thus increasing the orienting property of the SCOBA.

Through materialisation, concepts are considered as both learning content and learning tools. The application of materialisation in STI, however, does not aim for learners to memorise the content of the SCOBA. Gal’perin (1989) states, “systematic stage-by-stage formation excludes preliminary memorisation of the material followed by its application from memory” (p. 67). Materialisation of concepts (making abstract concepts tangible by deliberately and systematically organising and recording them in written and graphic form), on the other hand, aims to mediate internalisation of concepts through verbalisation.

2.1.3.2.3 Verbalisation

The last three stages of Gal’perin’s mental formation model (overt speech aloud, overt speech through whispering and inaudible inner speech) are grouped under verbalisation. The first of these is audible speech accompanying the use of a SCOBA. Here, verbalisation is applied in the process of learning as a “psychological tool [which] alters the entire flow and structure of mental functions” (Vygotsky, 1981, p. 137). From
this Vygotskian perspective, implementation of materialised concepts mediated by verbalisation increases conscious awareness as learners’ attention is drawn directly to task-specific conceptual tools. STI posits that automaticity or spontaneous applications which are not supported by clear conceptual understanding will not be fully transferable or sustainable, hence, cannot always be drawn upon when changes interrupt the routine conditions under which these applications normally occur. Similarly, intellectual insights of certain concepts lacking practical spontaneous applications will not be readily and fully accessible when the needs to apply these insights arise (Gal’pein, 1969).

The aim of concept-based instruction is, thus, to foster the internalisation of learning concepts and to enhance their transferral to different contexts. Therefore, it is important that “students learn to distinguish essential characteristics of different objects and phenomena, to form theoretical concepts on this basis, and use them as cognitive tools in future problem-solving (Arievitch & Stetsenko, 2000, p. 77). During this process, to aid their cognition and internalisation of the learning concepts, learners are encouraged to use verbalisation.

Swain (2006a) contributes to the knowledge and understanding of verbalisation and uses the term “languaging” defined as “the process of making meaning and shaping knowledge and experience through language” (p. 98). According to Swain, meaningful languaging is both the process and product of active learning from the part of the learners who are agents of their conceptual changes. Linguaging or verbalisation in this sense epitomises Vygotsky’s notion that speech is essential to the process of internalisation (Wertsch, 1981). Internalisation mediated by verbalisation is, thus, “the mechanism through which control of our natural mental endowment is established” (Lantolf & Thorne, 2006, p. 153). As “language and thought are bound together” (Antón & DeCamilla, 1999, p. 245), audible verbalisation assists learners in their attempt to regulate themselves and the tasks they are trying to complete.

Verbalisation as a form of self-regulation has potential to enable learners to direct their attention to specific task aspects. Apple and Lantolf (1994) contend that during a task “not only can planning occur simultaneously with speech, but that the very activity of speaking can, in fact, be planning, or more precisely, thinking, externalised as self-directed private speech, the goal of which is planning what to say about a particular topic” (p. 440). Talking through a concept and not just about the concept enhances learners’
understanding, clarifies ideas, defines meaning and sharpens learners’ sense of knowing and control over learning activities (Negueruela, 2003). It is this form of verbalisation that is a form of metacognitive strategy and self-regulatory tool introduced to participants in the present study.

The fourth and the fifth stages of Gal’perin mental formation model see verbalisation reduced to inaudible speech and subsequently completely abbreviated and turned into mental action. In these last two stages, abbreviation refers to both the gradual internalisation of audible speech and the gradual truncated form of the mental process. As learners gain mastery of the learning concepts, they become more skilled in completing the task and the task becomes easier and shorter and finally becomes fully abbreviated. Learners no longer need to be oriented by material. They do not need to rely on the SCOBA, nor do they need to verbalise the learning concepts and the task process aloud. Following the abbreviation of verbalisation, it is said that a mental stage of the concept (unit of instruction) has been formed. Mental activity no longer needs to be scaffolded by materialisation but becomes part of learners’ intrapsychological plane.

In summary, STI is systematically planned to offer guidance based on orienting quality of instructional tools which allows learning and development to unfold in assisted contexts. In adopting STI pedagogy, the present study is grounded in the very foundation of sociocultural theory which states that SCT research is premised on the concept of mediated action (Wertsch, 1991a). “The teacher’s role is preparing and organizing the series of assignments and can be characterized as coaching and guiding the process of the students’ gradual grasping of the concept’s content” (Haenen et al., 2003, p. 260). Teaching and learning activities are systematically developed to facilitate systematic exploration and internalisation of learning concepts mediated essentially by materialisation and verbalisation during various stages of mental formation. As learners achieve full mastery of the concept, their dependence on the orienting chart(s) begins to cease and gradually comes to an end. This transformation reflects Vygotsky’s (1978) assertion that “psychological operations that were achieved through direct forms of adaptation at early stages are later accomplished through indirect means” (p. 73).

2.1.3.3 STI-informed concept-based research

In this section, the arguments in support of the benefit of concept-based instruction and verbalisation come from Holunga (1994), Negueruela (2003), Ferreira
(2005), Johnson, (2008), Knouzi, Swain, Lapkin and Brooks (2010), Garcia (2012), and Frazier (2013). These studies offer comprehensive accounts of how STI and concept-based instruction can be successfully implemented in L2 classrooms. The significance of these inquiries is that they establish a relationship between self-directed speech and conceptual development.

Holunga (1994) investigated the effect of metacognitive strategies training with and without verbalisation on accuracy of oral production of vocabulary. Three groups of advanced EFL learners were given 15 hours of instruction on the same set of lexical items, focusing on verb forms. Holunga taught the first (M/V) and second (M) groups metacognitive strategies based on Brown and Palinscar’s reciprocal teaching techniques (1982), namely, predicting, planning, monitoring and evaluating strategies. Only learners in the first group (M/V) used verbalisation to discuss their strategies as they worked on problem-solving tasks in pairs. The second group (M) did not verbalise but simply used strategies during task. The third group (C), acting as a comparison group, was taught the same target lexical items but not metacognitive strategies and completed the same oral problem-solving tasks without verbalisation. All students were tested individually in a series of oral production tests on the use of the target lexical items. Holunga found that the groups with metacognitive strategies (MV and M) outperformed the comparison group (C), and that verbalisation during tasks coupled with strategy training boosted the performance of the MV group significantly. In addition, Swain (2000) contend that participants’ verbalisation in Holunga’s study was strategic and used for problem-solving, planning, and evaluating purposes.

Verbalisation also featured in a sixteen-week STI concept-based Spanish teaching intervention by Negueruela (2003) who analysed data from three developmental domains: definition, discourse and verbalisation. First, derived from participants’ explanation of the learning concepts, definition data offered insights on participants’ explicit theoretical understanding. Second, drawn from participant’ actual written work, discourse data represented the embodiment of the learning concepts in use. And third, verbalisation data revealed participants’ concept formation in process. Grammatical aspects were materialised through a SCOBA. As adult advanced learners of Spanish interacted with the SCOBA through the process of verbalisation, their understanding of grammatical concepts significantly increased. The SCOBA used in Negueruela’s study is shown next.
Findings from this microgenetic research suggested that materialisation and verbalisation assisted second language learners of Spanish in applying their knowledge in communicative activities. Negueruela concluded that learners’ active engagement with concepts, content and process was essential to quality instruction. Thus, materialisation of concepts or the use of conceptual/cognitive tools aided learning and development by serving three mutually reciprocal purposes: (1) as a learning concept became tangibly framed and transferred into a form of a flowchart, the concept itself became an instructional tool mediating the learning and raising learners’ awareness of that very concept; (2) learners were encouraged to verbalise their learning and thinking process. As learners talked to themselves about the concept and through the concept during task, the use of this conceptual tool (SCOBA) created an ideal condition of situated learning; and (3) verbalisation guided by this cognitive tool enhances the level of deep understanding, which in turn led to internalisation and subsequent learning and development.
Verbalisation was also included in a concept-based study by Ferreira (2005) who investigated how 14 EFL tertiary students attending a writing course at a US university developed their understanding of genre (Martin, 1983), following a concept-based approach training which “relied extensively on the use of models to help students understand and concretise the relevant concepts of genre” (Ferreira, 2005, p. 81). However, in this study, Ferreira did not follow Gal’perin’s STI as discussed above, but chose to employ a more dialogical model called Movement from the Abstract to the Concrete (MAC) (Davydov, 1988). The aim of the MAC approach is “to engage students in problem-solving situations that represent an abridged form of the discovery process of the academic discipline. In other words, no ready-made knowledge is provided; rather, knowledge is acquired through experiential learning” (Ferreira, 2005, p. 73). MAC instruction involves “a) problem situation, b) modelling, c) modifying the model, d) applying the model to solve tasks, e) monitoring the actions, and[sic] f) evaluating the actions, [and] g) social interaction” (p. 73). During the writing course, participants were required to write for specific audiences both real and imaginary. Writing tasks assigned were two announcements of the same event and an argument text on how genre was influenced by culture. Participants used verbalisation during task and while familiarising themselves with all learning models provided. Findings revealed that out of the six participants whose texts were analysed, two gained significant improvement in appropriating the concept of genre. Data also showed that two other participants were in a transitional process in which some understanding of the genre concept was demonstrated, while the last two working at the lower end of their ZPD showed very little evidence of improvement.

Also pertinent to the present study is the work of Johnson (2008). Most significantly this work has distinguished Gal’perin’s concept-based teaching from other forms of instruction, particularly in emphasising the role of both explicit instruction and teacher’s contribution in the teaching of academic writing. In his study, Johnson, like Ferreira, regarded genre as a concept and used verbalisation as a tool to mediate student’s learning, but he also used ‘Wiki’, an online learning tool, to promote discussion and collaborative writing activities of ESL university learners. In this 16-week study, students read and analysed several text samples with regard to rhetorical organisation, writing purposes and intended audience. Various schematic diagrams and charts were introduced to learners with the intention that these would mediate internalisation. Pre- and post-
questionnaires, interview, participant’s written texts and peer discussion verbal data were collected from three students. Findings revealed significant improvement in the writing of two participants, while the third participant demonstrated very little detectable gain throughout the sixteen weeks. Both Ferreira (2005) and Johnson (2008) noted how participants in their studies reacted to changes induced by the instructional approach chosen by the researchers, and acknowledged the affective factors in participants’ development.

Another recent study by Knouzi, Swain, Lapkin and Brooks (2010) also reported that verbalisation played a major role in L2 conceptual development. Based on Swain’s (2006a) earlier research which advocated languaging, Knouzi et al.’s microgenetic study examined languaging of the concept of voice in French by two female participants; a high performer and a poor performer. The participants, native speakers of English at a southern Ontario university, engaged in a reading task involving cards on which explanatory information was provided. An analysis was performed on their on-task verbalisation and pre- and post-test scores. The authors observed that both learners’ conceptual understanding was contextualised in verbalisation and identified 5 categories of verbalisation which informed their thinking: (a) paraphrasing involving restating, (b) inferencing involving integration of information from various cards, elaboration of known and new knowledge, and hypothesis formation, (c) analysing involving application of knowledge in sentences, (d) self-assessing involving self-monitoring, and (e) rereading. The authors focused on how the two participants responded to the information on the cards, and how they described and made use of it. In other words, the study aimed to understand how the participants made sense of the learning concepts and how the concepts were internalised and became integral to their thinking in self-scaffolding activity. Findings showed that language proficiency could facilitate or impede meaningful verbalisation and that the more proficient learner verbalised more comprehensively, covered a wider range of languaging types, and attended to these in a more balanced manner than did her less proficient counterpart. These findings point to certain linguistic advantages the more proficient learner might have had over her less able peer who, according to the authors, experienced more problematic languaging. One of the problems described was that the less proficient learner was not privy to the types of verbalisation that would lead to abstraction and generalisation of concepts.
Verbalisation data were also the focus of another concept-based study by Garcia (2012) who examined the role of verbalisation in promoting theoretical understanding of the Spanish grammatical concept of aspect. Three types of data, i.e., definition, written and verbal, were collected over a 12-week period from one of the thirty-two adult college students who were asked to define the concept being taught, complete written discourse and verbalise during the task. Essentially, Garcia aimed to “explore the role of mediation in the process of problem solving and concept formation through verbalization” (p.123). Specifically, verbalisation data were derived from two recorded interviews using dynamic assessment (Poehner, 2005) whereby the participant was asked to read and revise what he had written and perform a series of conceptual tasks related to his writing. The interview dialogues between the participant and the instructor included subtle and obvious mediational moves, such as asking for repetition or providing clarifications, confirmations and clues made by the instructor to facilitate concept formation. A significant finding was that verbalisation data revealed more comprehensive conceptual developmental changes than did discourse and written data. Garcia concluded that “verbalization is a mediational tool that connects thinking and speaking, allowing the learner to reach the necessary level of abstraction to complete a task that he would not be able to complete otherwise” (p. 157). The author noted that although full internalisation and regulation was “far from being complete” (p. 156), conceptual development mediated by verbalisation was evident. Findings showed that verbalisation helped advance the participant’s conceptual understanding, increased his awareness of the concept and resulted in greater self-regulation over grammatical features. Verbalisation, Garcia argued, was an important mental tool and key strategy on which future L2 learning and development could be built.

Also, guided by Negueruela’s STI concept-based research (2003), the work by Frazier (2013) made use of “verbalization for internalization purposes” (p. 103) and showed how verbalisation mediated scientific knowledge and helped participants gain regulation over the Spanish grammatical concept of modality. Personal, self-reflection, definition, verbal and written data were collected from six adult participants who enrolled in a one-semester heritage language class at a US university. Of note was that verbalisation in this study took both oral and written forms. Participants were asked to express their thoughts, ideas, and understanding which constituted their self-explanations as they responded to the SCOBA (the didactic schematic representation of the modality
concept) and learned the grammatical features. Participants also completed five communicative written tasks which involved responding to open-ended prompts and an essay. Findings showed that verbalisation assisted the formation of theoretical understanding. Aided by verbalisation and the SCOBA, participants were able to articulate their understanding of modality as a scientific concept and improve their written performance. Findings also suggested that not all participants developed in all areas at the same rates. That is, some grammatical features seemed to come under control of some participants but not others. Frazier noted, “Each student’s path of development was different” (p. 206). Additionally, it was found that participants demonstrated some nascent developmental changes which did not appear to increase in strength during the course, possibly because more time was needed.

So far, this chapter has presented a detailed account of key SCT tenets and Gal’perin’s STI approach, substantiated by corresponding studies. The list of studies presented above is by no means exhaustive. However, to my knowledge, SCT-based research to date has concentrated on the mediational role of speech in discourse mainly during collaborative task and peer feedback, while the more specific STI-based research has not been extended to cover the context in which reading and writing are integrated in the same task as seen in discourse synthesis. This gap in the literature merits further research attention and gives rise to the conceptualisation of the topic under investigation in this thesis.

The present Study adopts Gal’perin’s STI as the main pedagogical approach. During the data collection period, the research intervention mediated three scientific concepts of discourse synthesis, argumentation and textual coherence. These concepts are presented in the next major section.

2.2 **Scientific concepts taught during the research intervention**

In this section, I first present an overview of the three scientific concepts, i.e., discourse synthesis, argumentation and textual coherence. For each concept, relevant literature is first presented from the mainstream second language acquisition (SLA) tradition. Following this, I will examine the concepts through the SCT lens.
2.2.1 Discourse synthesis

Before presenting related studies, it is essential to first provide the definition of discourse synthesis. Next, key concepts on discourse synthesis are discussed and a sociocultural perspective on discourse synthesis is presented.

2.2.1.1 Definition of discourse synthesis

Spivey (1984) coined the term “discourse synthesis”, defining it as “an active process of text construction in which a writer reads textual sources on a particular topic, selects some of the available information from the sources and combines elements in a new way, providing an overall organisation as well as connectivity among related ideas” (p. 1). From this description, several inferences can be made: (a) both reading and writing skills are required; (b) information from reading is used in writing; (c) a new text serving a new purpose must be achieved; and (d) strategic integration of multiple pieces of information is essential.

Discourse synthesis is essentially a “hybrid” task which requires learners to assume the role of both readers and writers and draw on information provided as well as their own opinion and prior knowledge (Spivey & King, 1989, p. 4). Discourse synthesis is also known as reading-to-write or writing-from-sources (Flower, 1990). Synthesising involves making multiple decisions during multiple sub-processes and interrelated activities, and is found to be challenging even to most L1 college students (Segev-Miller, 2004).

L1 composition research contributes significantly to the understanding of discourse synthesis as early writing-from-sources studies examined on how native speakers of English managed their tasks. More recently, informed by earlier L1 studies, L2 research indicates that successful discourse synthesis is premised on several key concepts including intertextuality (Gee, 2004; Hartman, 1995), task representation (Flower, 1990), pattern of task orientation (Basham, Ray & Whalley, 1993), critical and logical thinking (Flower, 1990; Siegel, 1997), goal-setting (Yang & Joe, 2007; You & Joe, 2006), and textual-borrowing (Pecorari, 2003; Shi, 2004). Each concept is discussed as follows.
2.2.1.2 **Intertextuality**

Most L2 writers face a challenging task in presenting their own ideas together with those from what they read (Howard, 2001). Linking what they know to what they read can become even more daunting when reading and writing from multiple texts (Pecorari, 2003). Consolidating different information sources from reader, writer and textual perspectives entails the knowledge of intertextuality.

Intertextuality refers to the coming together of texts, readers, and writers in all their complexities (Gee, 2004). According to Hartman (1995), in reading from multiple texts, students make three different kinds of textual links which occur between information in the text being read and (a) other information within the same text, (b) students’ knowledge from texts previously read and (c) other texts they are reading on the same task. Hartman also identifies three types of readers according to the way they engage themselves in their reading as: (a) lococentric readers who read with total acceptance of the writers’ authority; (b) intertextual readers who explore and create various possible intertextual links; and (c) resisting readers who assert their own interpretation of what they read. As learners read in order to write, they thus adopt the role of both a reader and writer. Whereas intertextuality explains how learners read, compare, and evaluate source information, how they write may depend largely on their task representation.

2.2.1.3 **Task representation**

Flower (1990) defines task representation as “an interpretive process which translates the rhetorical situation--as the writer reads it--into the act of composing” (p. 35). According to Flower, task representation is not a single visualisation but “an extended interpretive process that weaves itself throughout composing. . . . and may evolve in surprising ways” (p. 36). Although students may approach their writing with certain perception of what the task requires, during the recursive composing process, the initial task representation held in their mind may be affected by new goals or new information being read or written. Furthermore, task representation is contextualised and socially situated. That is, learning histories and literacy experience in a given learning context influence how task representation is formed (Flower, 1990).

Task representation, according to Flower, is constructed and not simply chosen. Rather, “elements of the social, cultural, and immediate academic context are boldly
apparent in this process” (p. 54). According to Kantz (1990), learners derive their interpretation of task from the instruction and the learning context based on their existing experience and knowledge of the reading/writing topic. Kantz notes that task interpretation is also influenced by what learners think their teacher’s expectations might be. Research shows that learners can interpret the same instruction differently. Consequently, they form different task representations which in turn influence how they write (Connor & Kramer, 1995). Ruiz-Funes (2001) gave the same instruction to fourteen university students learning Spanish to write from one reading text, supplemented with class notes and other references. Three participants produced a summary of the source text presenting the information chronologically without critically responding to the content. Six participants produced a summary with short superficial critiques. The remaining five participants performed a discourse synthesis task, selecting, transforming and integrating information provided with their ideas “in an analytical and elaborated fashion” as intended by the researcher (p. 231). Findings also revealed that participants’ ability to compose with minimal grammatical errors was not indicative to the rhetorical quality of their texts, and although they could write complex sentences correctly, lack of sophistication in how they expressed their ideas still prevailed. Ruiz-Funes commented that participants chose writing correct sentences over sophisticated style and expression possibly because grammatical accuracy leading to higher grades was one of participants’ writing goals.

Spivey (1990) contends that a discourse synthesis task representation includes three sub-tasks: organising, selecting and connecting. Organising occurs when learners go through the meaning making process trying to understand that task and, subsequently, constructing a mental plan of how they will execute their task. Selecting refers to locating and drawing relevant information from source texts guided by the plan. Connecting involves interacting with selected information drawing on their own knowledge, making inferences, transforming the information and integrating this in their texts to suit their purposes or writing goals. In what follows, how learners interact with task, text, and topic is discussed in terms of three patterns of orientation reflecting learners’ perception of task representation.
2.2.1.3.1 Patterns of task orientation

Three types of orientation signify the patterns of reader/writer-text-task interactions (Basham et al., 1993). First, learners may demonstrate “orientation toward text” (p. 304), interacting with information provided by “questioning words, structure, and author’s intentions” (p. 308) and appropriate source texts in their writing. While text orientation is part of task requirement, negative text orientation may occur when learners writing largely through regurgitating or summarising information from source texts. Socioculturally, this is evident in the writing of Asian students who may “have been socialized to demonstrate to a parent or teacher what they know, regardless of how well they know it” (p. 311) and “are traditionally oriented toward the text” (p. 312). Second, learners may demonstrate their “orientation toward task”, defined as “repeated references to the instruction, as well as evidence of students’ struggles to figure out what they were expected to do” (p. 309). Third, learners may demonstrate their “orientation toward topic”, defined as “the tendency for students to talk or write about their own ideas to the exclusion of any explicit reference to the reading passage” and therefore make very little or no use of text provided (p. 310). The type of instruction learners are exposed to may influence how they think and behave. Thai learners, for instance, are not familiar with reading-to-write processes and rely on what they already know as they are normally asked to write from memory or background knowledge (Kaewnuch, 2008).

Orientation patterns while composing from sources reflect learners’ L1 literacy histories and L2 sociocultural knowledge. For instance, orientation towards text may be influenced by learners’ lack of L2 cultural background and insufficient L2 literacy experience. Consequently, L2 students tend to be text-oriented and rely on what they read as an information source. As “academic writing often requires students to write from an expert position, even when they do not consider themselves to be experts on their topics” (Tardy, 2010, p. 13), many students use copying as a key strategy when selecting and integrating information (Campbell, 1990). They may also have difficulties in transforming or responding to texts constructively due partly to low English proficiency (Shi, 2004). Low proficiency may also result in L2 learners responding to only information they are able to understand (Asención-Delaney, 2008).
2.2.1.4 Critical thinking and logical thinking

This section focuses on student writers’ abilities to think critically, carry out necessary planning and present information coherently and logically. (This discussion is augmented in subsequent sub-sections on argumentation and coherence.) Ennis (1987) defines critical thinking as “reasonable reflective thinking that is focused on deciding what to believe or do” (p. 10). Halpern (1996) views critical thinking as “thinking that is purposeful, reasoned, and goal directed. It is the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions” (p. 5). Siegel (1997) contends that critical thinkers are “appropriately moved by reasons” (p. 3). Critical thinking thus encompasses logical thinking. For the purpose of this study, critical and logical thinking is taken to subsume learners’ ability to think systematically, rationally and reflectively and to make informed judgement while being aware of the task at hand and of alternative solutions and possible outcomes. Key aspects of critical and logical thinking during a reading-to-write task are setting clear goals, engaging in comprehensive planning, using correct citation and carrying out revision (Flower, 1990). Goal-setting, textual borrowing and citation practice are of particular interest to this study.

2.2.1.4.1 Goal-setting

Goal-setting has been known to affect task performance (Flower, 1990). While goal-setting is considered crucial in both reading and writing, it remains an area underexplored in discourse synthesis research (You & Joe, 2006).

Recent research confirms the benefits of goal-setting instruction. You and Joe (2006) reported a successful application of explicit reading-to-write instruction on goal-setting, selecting information and integrating information. For five weeks, in this eight-week study, explicit instruction was presented in a form of self-questioning collectively comprising 18 questions modelled by the instructor. Twenty-eight Taiwanese tertiary wrote three successive essays on the same topic, comparing two convenience stores which all participants had frequented. The essays were composed under three task conditions: (1) writing from experience; (2) writing from reading texts provided without reading-to-write instruction; and (3) writing from the same reading texts provided following goal-setting and reading-to-write training. Students worked in groups using self-questioning to discuss and revise their written work. It was found that in the third compositions participants showed increased awareness of their audience, became more skilled in
selecting and integrating information from source texts and wrote significantly better essays.

Another study was by Yang and Joe (2007) who investigated the effects of goal-setting of seven Taiwanese EFL university students composing from three sources. They found that goal-setting was influenced by two factors. First, task specifications influenced goal-setting in terms of rhetorical organisation and writing stance which subsequently impacted on how participants selected and presented information in their writing. Second, consolidation of prior knowledge and source information influenced goals leading to constructive organisation of new and old knowledge at content level. Textual clues such as key words in task specifications were found to be useful in goal-setting, although different participants interpreted the task differently based on their beliefs, strategies and previous literacy experiences.

Writing from sources is a purposeful, goal-directed task and how learners complete their writing depends on the goals they set and their understanding of task (Flower, 1990). In discourse synthesis, writers may hold multiple writing goals. Some of these goals are set during planning.

Research also shows that successful readers/writers interact with texts earlier during planning and in a more thorough and meaningful manner than do their less successful counterparts (Flower, 1990). Expert readers/writers do more planning during the post-reading/pre-writing stages, allocating considerable time to read, re-read, analyse, paraphrase and summarise information from source texts. The quality of learners’ summaries may reflect the quality to their outline, initial drafts and subsequent synthesis (Mateos & Solé, 2009). Summarising and outlining during pre-writing stage are found to promote subsequent synthesis writing quality particularly for good readers who are able to recognise textual cues and signals, identify key information leading to the development of main ideas, and effectively apply their experience and prior knowledge of the topic in their present reading task (Winograd & Bridge, 1986).

During the pre-writing phase, constructive interaction between students and reading texts reflects students’ ability to understand, select and organise source information. This ability subsequently influences the quality of what they write. Plakans (2008) investigated composing processes of 10 ESL tertiary students writing with and without sources under test conditions and found that more skilled writers did more
planning and interacted more with their sources, whereas less-skilled participants interacted less with information provided and tended to progress through the task in a linear fashion.

Plakans (2009b) examined essays, interview data, and verbal protocols from six L2 undergraduates who wrote a short essay based on two paragraph-length source texts of opposing viewpoints. It was found that four participants, who were more proficient, had more experience with discourse synthesis, and were familiar with the writing topics, performed better in their writing, spent more time organising, demonstrated more frequent purposeful search for useable information from the sources, and engaged with the selected information with their own idea more critically than did their two less proficient peers with less task and topic familiarity.

Another recent study was by Lin (2008) who investigated synthesis processes of 14 senior high school Taiwanese participants. Synthesis processes were found to comprise three functions of integration, reconstruction and reduction. Integration referred to combining several pieces of information extracted verbatim from source texts to produce new writing. Reconstruction involved integration using participants’ own words. Reduction occurred when participants deleted insignificant information or reduced several microstructures to form a new macrostructure. Lin found that reduction mainly involved ignoring culturally unfamiliar information. Lin concluded that synthesising processes depended largely on interactions between source information and participants’ prior knowledge.

Wolfersberger (2007) investigated argumentative reading-to-write behaviour of four Chinese EFL undergraduates of varying proficiency levels. Data from interview, class observation and participant-produced artefacts revealed that more proficient readers demonstrated greater awareness of their audience and managed their writing through problem-solving processes which led to new ideas as they composed. Less proficient participants, on the other hand, focused on generating content with little evidence of problem-solving and audience awareness. Further, it was found that being able to identify important information while reading was essential and contributed to quality responses to what was being read. Insufficient understanding and lack of ability to recognise textual cues could also cause difficulty in both reading and writing, and participants who were
Another area which provides evidence of critical and logical thinking is how students use source texts to present or support their propositions. This aspect is discussed next.

### 2.2.1.4.2 Textual borrowing and citation

Textual borrowing concerns how source information is used in students’ texts and how the original authors are acknowledged (Shi, 2004). There is evidence that L2 learners’ difficulty in producing a good synthesis with appropriate citation may be caused by lack of explicit mediation and practice in their language class.

Shi (2004) analysed essays written by 39 native English-speakers from an American university and 48 ESL Chinese undergraduates in China. Whereas the third-year Chinese students only learned how to reference after completing their second year at university, the first-year American students reportedly had already been taught how to use source texts. Half of the participants wrote a summary while the other half completed an opinion writing task. Findings showed the summary group borrowed more textual information from the source texts than did the opinion group. Shi suggested that the nature of the summary task demands might have required readers/writers to draw heavily on the original texts, whereas the students in the opinion group might not have needed to rely on the original text as much. Shi contended that it was conceivable that due to their lack of linguistic resources and minimal experience in academic writing “L2 writers imitated and reproduced larger segments of other’s words with no apparent intention to steal and cheat” (p. 191). Findings highlighted the need for explicit instruction regarding correct source use and appropriate citation methods.

Textual-borrowing difficulties faced by L2 writers was also found in a study by Keck (2006) who compared source use by 165 university L1 and L2 writers. Two 1000-word essays of similar nature were randomly distributed and each participant was asked to summarise only one text. Keck examined writers’ attempt to paraphrase and integrate what they had read in their summary. “Attempted paraphrase was defined as an instance in which a writer selects a specific excerpt of a source text and makes at least one attempt to change the language of the selected excerpt” (p. 263). Changes made to the source text...
included syntactically and lexical changes. Lexical changes ranged from a single word to multiple words, while unchanged text could also contain a chain of words as well as multiple words, each reused separately in the new text. The study showed that while both L1 and L2 participants attempted to paraphrase rather than copy directly from the source text, L2 writers made fewer changes than did their L1 counterparts who made considerably more substantial changes to the text they reused. It appeared L2 writers lacked paraphrasing skills essential for discourse synthesis.

Minimum attempt to paraphrase, poor citation practice, and awkward word choice could be viewed as evidence of L2 writers’ negotiating their way through a new textual and cultural terrain (Shi, 2004). As most L2 learners are “unfinished writer[s]” in the process of acquiring academic expertise in terms of disciplinary content and discourse (Howard, 2001, ¶ 6), having neither the confidence nor the expertise in academic discourse, many students may choose to copy the source information in order to sound more authoritative (Shi, 2004). While the proliferation of copying practice and the tendency not to accredit original authors are more commonly found in text by L2 writers, difficulties in writing from sources are faced by both native and non-native speakers of English (Campbell, 1990). The final result will then appear to be nothing more than a cut-and-paste product, possibly not answering to the frameworks and standards set by the disciplines (Horowitz, 1986).

In some cases, L2 students may, regardless of their understanding of plagiarism, chose to integrate source information in their work without appropriate citations and use patchwriting as a strategy to cope with the task demands (Li & Casanave, 2012). According to Howard (2001), “patchwriting comes from uneven reading comprehension: the student doesn’t fully understand what she is reading and thus can’t frame alternative ways for talking about its ideas. Or the student understands what she is reading but is new to the discourse” (Howard, 2001, ¶3). Although “textual plagiarism is routinely assumed to be the result of intentional deception” (Pecorari, 2003, p. 337), L2 writing is not always a result of an objectionable or sinister act but evidence of students’ attempt to navigate an unfamiliar writing terrain.

Lack of logical and critical thinking ability may result from lack of instruction. Lo (2011) examined discourse synthesis writing processes and products of six Taiwanese EFL English-major undergraduates, three of whom were efficient writer while the other
three were less skilled. In this study, participants were informed of the reading-writing connection and asked to base their writing on the source provided, but they were not trained in critical thinking. Findings revealed that skilled writers returned to the source more often in search of useful information, performed better regarding problem identification and stating clear claims than did their less skilled peers, whose frequent rereading of the source appeared to have resulted from their incomplete comprehension rather than to serve text-mining purposes. Additionally, translating was used most often, predominantly by less skilled participants, whereas paraphrasing was scarce and only attempted by two of the skilled writers. Interestingly, all participants demonstrated little evidence of critical thinking such as considering opposing views or determining causal relations and consequences. Lo pointed out that “Asian EFL writers need to be first taught critical reading and thinking skills for the reading-to-write task” (p. 166).

In most Asian learning environments, learners commonly memorise and regurgitate the content of their textbooks with the aim of passing the exam (Howard, 2001). Further, “in many Asian countries, students writers are expected to incorporate unattributed significant passages from authoritative sources” (¶ 5). As L2 writers incorporate large segments of the source information in their writing rather than presenting ideas logically and substantiating these with source information, their writing may lack evidence of logical and critical thinking. Inevitably, these students produce writing of poor quality.

Principally, factors affecting reading-to-write quality, cited in most L2 composition studies, are extensive task demands (Campbell, 1990), reading and writing abilities (Esmaeili, 2002), divergent literacy practice based on L1 culture (Pecorari, 2003), goal-setting (Yang & Joe, 2007), planning (Plakans, 2008), experience in academic writing (Hyland, 2003), and prior exposure to appropriate source use (Shi, 2004). While much attention has been given to the various linguistic, pragmatic and cultural deficits of L2 writers, most findings call for less focus on the native/non-native dichotomy and more rigorous actions in empowering and initiating language learners into the academic community.

So far, this section has presented an overview of discourse synthesis, a scientific concept in this thesis. It has looked at how discourse synthesis is defined, what governs discourse synthesis task representation, and how writers may orient themselves when
reading-to-write. It has also reviewed related studies with a particular focus on L2 writing-from-sources research. The ensuing paragraphs outline how discourse synthesis is conceptualised within the SCT theoretical framework.

### 2.2.1.5 Sociocultural perspective on discourse synthesis

From a sociocultural theoretical perspective, writing is a scientific concept that must be systematically taught (Vygotsky, 1978). Also, synthesis writing is fundamentally a goal-directed social process and a sign-mediated form of behaviour. In writing-from-sources, both the source texts and learners’ texts represent cultural artefacts which are social by nature. By definition, successful synthesis implores students to use writing as a psychological tool as opposed to a means to regurgitate their personal experiences in a knowledge-telling mode (Bereiter & Scardamalia, 1987). This points to writing as “a means for mediating intellectual activity” and “a tool to be used in further processes of knowledge construction and dissemination” (Wells, 1994a, p. 6). Discourse synthesis requires learners to negotiate the source texts and write logically and convincingly, drawing on information provided as well as their own opinion and prior knowledge. As they write, emerging ideas are formulated through semiotic mediation in connection with the task, text, self and audience, all of which must be strategically synchronised. Students’ voluntary control over task or self-regulation exerted during discourse synthesis is central to the present investigation. In this thesis, writing-from-sources involves argument writing. The discussion will now turn to argumentation, the second key scientific concept taught.

### 2.2.2 Argumentation

This section presents a definition and an overview of argumentation rhetoric. The discussion focuses on argument structure proposed by Toulmin (1958). Also included in this section is related research based on the Toulmin’s system of argumentation. As well, perceived difficulties in applying the Toulmin’s model is presented. This section concludes with a sociocultural perspective on the nature of argumentative composition.

#### 2.2.2.1 Argumentation definition and the Toulmin’s model

Argumentation is defined as “those utterances that succeed or fail only to the extent that they can be ‘supported’ by arguments, reasons, evidence or the like and that are able to carry the readers or the hearer along with them only because they have such a
‘rational foundation’” (Toulmin, Reike & Janik, 1984, p. 5). As the primary purpose of argument essays is to influence the readers, argument writing is essentially reader-based (Hyland, 2002). To write argumentatively, the writers must set clear goals to convince the readers to change their mind or to take a particular action. Successful writing thus requires both audience awareness and the inclusion of audience needs in goal-setting particularly in the pre-writing stages (Kellogg, 1994). Moreover, the writing goals encompass not only how to present the writers’ point of view but, more importantly, also to anticipate the readers’ expectations and reactions (Connor, 1987). Successful writers, thus, should keep in mind their audience throughout the entire writing process. In order to become competent writers capable of engaging the readers in intelligent argumentation, writers must develop their conceptual understanding of the argument structure and acquire necessary strategies which will help them write logically and persuasively.

Research has shown that argument rhetoric can be successfully taught (Crammond, 1998; Yeh, 1998) and that learners’ ability to reason logically increases as they mature with age (McCann, 1989). Chambliss (1995) notes that research on argumentation in academic writing often draws on the work of Toulmin (1958) and Toulmin, Reike & Janki (1984). Toulmin’s (1958) argumentation system consists of claim (writer’s main assertion), data or ground (used to justify claim), warrant (used to demonstrate how data or grounds are relevant or linked to claim), rebuttal (opposite stance/exception to claim), backing (additional information in support of warrant or evidence safeguarding against possible rejection of claim), and qualifier (limitations in terms of frequency such as always, usually, often or rarely). The Toulmin’s model “has been both influential and pervasive in materials for writing instruction” (Lunsford, 2002, p. 110). It has been used in both L1 and L2 composition studies (Ferris, 1994; Qin & Karabacak, 2010; Saito, 2010; Uysal, 2012; Varghese & Abraham, 1998).

### 2.2.2.2 L2 studies based on the Toulmin’s model

The Toulmin’s model has been used to analyse essays written by adult native and non-native speakers of English, with and without explicit instruction on the model. Research shows that many L1 and L2 writers find argumentative writing challenging.

For instance, Ferris (1994) examined 60 persuasive essays written by 30 L1 and 30 L2 first-year undergraduates. Claim, data and warrant were found to be factors differentiating between good and poor argument. Non-native writers, despite being
advanced learners of English, were found to have difficulty presenting these three key argumentative elements based on the Toulmin’s model, whereas their native counterparts, having included more convincing argument moves, scored significantly higher. More specifically, native writers produced twice as many counterarguments in comparison to non-native students. Note that students in this study had not been explicitly taught the Toulmin’s model.

Essays by English-major students who had not received instruction on the Toulmin’s model were also analysed. Qin and Karabacak (2010) examined L2 argument quality using the Toulmin’s model. One hundred and thirty-three Chinese sophomores with nearly two years’ experience in academic writing completed a reading-to-write argument task. Participants were provided with two texts with contrasting views. Half the participants wrote an argument essay on the effects of the Internet on human interaction and the other half focused on whether the computer helped with education. To prevent participants’ direct copying from the source texts, they were asked to take notes and make a list of key words from the reading texts which were later removed prior to writing. In addressing coding difficulties during argument feature analysis, the researchers cited Crammond, (1998) and Stapleton (2001) and used assertion markers such as “I think” and “I believe” to code text segments as claims, and used “because” and “for this reason” to signify grounds. Findings showed that whereas in many instances claims were supported by multiple grounds averaging one claim per four data, the use of counterarguments was noticeably scarce. The authors concluded that argument essays written by L2 learners demonstrated similar characteristics of claims and data as those produced by native English speakers as shown in composition studies. The notable lack of counterarguments, found to be key predictors of essay quality, pointed to pedagogical needs for these to be explicitly drawn to students’ attention.

Another study which collected data without explicit argumentative instruction was by Uysal (2012) who investigated the differences in argument quality of essays written by the same participants in two languages. Eighteen Turkish native speaking learners of English currently in the U.S. for undergraduate and post-doctoral studies participated in this research. A survey-type questionnaire provided participants’ background literacy data. A total of 36 argument essays were collected in one week. Retrospective interview data followed in order to discuss the marked essays. It was found that 61% of participants acknowledged contrasting viewpoints by including rebuttals in
both their Turkish and English essays. In fact, addressing counterarguments was most frequently mentioned in the survey. During the interview, participants were able to articulate the significance of rebuttals in Western argument rhetoric and contrasted this with their L1 argument pattern commonly used in Turkish. Furthermore, data revealed a common presence of assertiveness in both English and Turkish, although assertiveness was applied more extensively in Turkish essays than the English essays in which hedging and vagueness markers were more evident. Consistent with available literature in composition studies was interview data confirming that language use was determined by participants’ English proficiency, cultural background and L1 literacy experience.

Other scholars have focused on providing explicit instruction to help students become better argument writers. In an early study by Varghese and Abraham (1998), a group of second-year English-major students in Singapore completed a genre-based instruction course focusing on improving their argumentative skills based on the Toulmin’s model. Particular attention was paid to formulating claims, grounds and warrants. A pre-intervention test was administered. Following this, throughout the course students read model texts with the view to weigh out arguments proposed by the writers. As well, the class completed their writing, keeping in mind their purpose to convince the audience and realising they “would have to anticipate and address readers’ objections to their standpoint by producing thought-provoking counter-arguments to readers’ rebuttals” (p. 290). Post-instruction scores revealed that participants made headway in the areas of addressing counterarguments, audience awareness, logical reasoning and emotional appeals. They were able to present clear claims, offer relevant and adequate supports, and produce more thoughtful warrants.

Explicit instruction has also proved effective for improvement of argument writing by Thai EFL English-major students. Saito (2010) examined argument texts written by 37 third year students enrolled in a compulsory writing course in a Thai university. Following five-week explicit instruction including text modelling and text analysis focusing on argument rhetoric and the writing process of pre-writing, drafting and revising, the first and second drafts of students’ essays were analysed. Both drafts of the essays were first scored holistically by two raters using a five-point scale. This was followed by analytical scoring of modified Toulmin’s argument features of claim, data, opposition and refutation, using a six-point scale. Findings showed significant improvement in students’ second drafts in comparison to their first drafts in all features.
Participants were able to write clear thesis statements, providing adequate supporting information and acknowledging opposing viewpoints.

### 2.2.2.3 Sociocultural perspective on argumentative composition

From a sociocultural perspective, the analytical and critical requirements of successful argumentation bear the hallmarks of higher mental functions and self-regulation. How students develop argument skills can also be explained from an SCT perspective. Bereiter and Scardamalia (1987) suggest that argumentation is age-specific; older students are able to form better arguments and demonstrated greater audience awareness than do younger learners. Also, learners’ tendency to focus on their own opinions and neglect opposing views may be explained in relation to the absence of a conversation partner. According to the authors, children first master narrative writing before progressing to argumentation. In learning to formulate their argument, children turn to their prior experience, not for chronological organising pattern as seen in narrative writing, but for a more complex hierarchical manipulation of ideas. They rely on exchanges of varying viewpoints, feedback and scaffolding statements given by parents, teachers or peers. During writing, when there is no one to converse with, young writers demonstrate a tendency to focus on one-sided argument and need to be shown how to develop logical arguments and manage counterarguments to serve social purposes.

Sociocultural scholars view writing as a social act. Writers must do their best to facilitate the needs of the audience in the absence of verbal negotiation (Hyland, 2005). One way of fostering readers’ understanding is through the writer’s intentional use of logically connected and strategically placed propositions to enhance the coherent quality of texts. In what follows, I discuss textual coherence, the third scientific concept mediated in this study.

### 2.2.3 Textual coherence

In this section, I first address the definitions of coherence and cohesion. Next, I present two key coherence mechanisms taught in this thesis, i.e., cohesive ties (Halliday & Hasan, 1976) and topical structure (Lautamatti (1987). For the purpose of this study, coherence is contextualised in argument composition. In addition, textual rhetorical analysis performed on participants’ essays focused primarily on semantic progression and logical argument development from the Toulmin’s perspective in which coherence was
also embedded. A detailed analysis on coherence mechanisms used by participants is beyond the scope of this study. Nonetheless, discussion on coherence is presented to bring into view pedagogical positions underpinning the teaching of coherence during the intervention.

2.2.3.1 Definitions of coherence and cohesion

Coherence is an elusive concept within the field of composition research. Perhaps the most intriguing aspect of coherence is that the concept itself is difficult to define and “there is little consensus on the matter of an overall definition of coherence” (Grabe & Kaplan, 1996, p. 67). Therefore, rather than attempting to definitely spell out what coherence is, many researchers settle on saying what coherence does.

Coherence is derived from logically and congruently produced text. A text is said to be coherent when readers are able follow the development of the writer’s thoughts and propositions with ease. Easy to read texts do not happen accidentally but result from the writers’ intentional selection and juxtaposition of lexical, semantic, and rhetorical choices in anticipation of the audience’s needs (Grabe & Kaplan, 1996). Coherence, from this perspective, is not a final sum of various textual elements but a holistic and subjective textual quality. Lautamatti (1987) contends that coherence can be instantiated by logical progression of discourse topics. By repeating or extending the discourse topic, writers can create a logical semantic flow and, hence, coherence.

Another conceptualisation of coherence is proposed by Johns (1986) who differentiates reader-based from text-based coherence. Reader-based coherence, as the name suggests, reflects the quality and unity of text as perceived by the reader, whereas text-based coherence reflects textual features at a sentence level as determined by the types, functions and frequencies of cohesive ties used and “consists of the ordering and interlinking of proposition within a text by use of appropriate information structure (including cohesion)” (p. 251, parenthesis in original).

One concept commonly discussed in relation to coherence is cohesion. Both coherence and cohesion have long been part of scholarly debate with regard to their definitions. Arguing that cohesion and coherence contribute to textuality, de Beaugrande & Dressler (1981) maintain that “cohesion concerns the way in which the components of surface text, i.e., the actual words we hear or see, are mutually connected within a
To these scholars, cohesion is a syntactic textual feature creating and reflecting intra-textual interconnectedness, elements of which perform duties of pointing at and being pointed to by other grammatically dependent cohesive items of the corresponding syntactic and semantic qualities. Hoey (1991) contends that “cohesion may be crudely defined as the way certain words or grammatical features of a sentence can connect that sentence to its predecessors (and successors) in a text” (p. 3). Hoey regards cohesion as “a property of the text that is objective, capable in principle of automatic recognition” (p. 12), whereas coherence is “a facet of the reader’s evaluation of a text that is subjective and judgments concerning it may vary from reader to reader” (p. 12). In most cases, readers recognise cohesion by the writer’s inclusion of appropriate cohesive ties that hold the text together.

While the above scholars differentiate between coherence and cohesion, Halliday and Hasan (1976) focus mainly on cohesion or “a semantic relation between an element in the text and some other element that is crucial to interpretation of it” (p. 8), and “speak of coherent text as being cohesive (i.e., having appropriate ties among sentences)” (Johns, 1986, p. 247, parenthesis in original). Halliday and Hasan present grammatical and lexical cohesion as two main mechanisms holding the text together. Grammatical cohesive devices include reference, ellipsis and substitution, whereas lexical cohesive ties include reiteration and collocation.

Although no agreement has been reached for a workable definition of coherence, many scholars agree that coherence is crucial for text production and text comprehension, and that learners should be shown how to write coherently (Hinkel, 2001; Lautamatti, 1987; Lehman & Schraw, 2002). With regard to the teaching of coherence, Weissberg (1984) emphasises that “it should not be assumed that students will necessarily produce readable texts simply by scattering a certain proportion of repeated words or anaphoric pronouns in the topic portions of their sentences” (p. 495).

For the purpose of this study, coherence is viewed in relation to argumentation. Argumentative coherence is operationalised as logical semantic development and conceptual progression based on the Toulmin’s model. This study holds that argumentative coherence, as perceived by the reader, reflects the overall semantic connectivity and argument development supported by rhetorical features as well as lexical and grammatical links that make text easy to read and agreeable to reader’s expectations.
From this perspective, coherence is not an inherent property of text and may be viewed, as a matter of perception, to exist in varying degrees. While writers must take the responsibility for enhancing coherence, readers also contribute to the emergence of a perception of coherence in their mind.

The present study views coherence as a scientific concept and as such should be explicitly taught. Together with the Toulmin’s model introduced as the macrostructure for coherent argumentation, the concept of coherence introduced to participants covered: (a) five categories of cohesive devices, namely, reference, substitution, ellipsis, conjunction, and lexical cohesion (Halliday & Hasan, 1976); and (b) topical progression (Lautamatti, 1987). The following discussion is not intended to be an exhaustive review of studies in this area but to make explicit the teaching content of the concept of coherence.

### 2.2.3.2 Cohesive devices

Most notable and frequently quoted work on cohesion and coherence is that of Halliday and Hasan (1976) in which cohesive devices are divided into five categories of reference, substitution, ellipsis, conjunction, and lexical cohesion.

#### 2.2.3.2.1 Reference

Reference is defined as items whose meaning and semantic properties reside within other main objects or nouns, which could appear within and outside text, thus, subdivided into situational (exophora) and textual (endophora). The former is closely related to readers’ knowledge of the topic and of the world. The latter is further described to consist of items referring to: (a) preceding text or things (namely persons, objects or places) previously mentioned (anaphora); and (b) those whose meaning could be retrieved by looking towards following text or things yet to be mentioned and made clear to readers (cataphora).

#### 2.2.3.2.2 Substitution

Substitution refers to a mechanism which allows writers to avoid repeating or using the same words. Substitution is anaphoric by nature and can appear similar to reference to some readers. Distinction is made to separate substitution from reference. Whereas reference may point forwards or backwards and could indicate either situational
or text-bound connections, substitution, though similar to reference due to being potentially anaphoric in its disposition, must conform to intra-text connections and refer only to items within the same text. Substitution results in a much shorter text as it can be used to avoid repetition of chunks of words or even complete clauses, unlike reference which only refers to a single word or noun phrase.

2.2.3.2.3 Ellipsis

Ellipsis is similar to substitution in both form and function. “An elliptical item is one which, as it were, leaves specific structural slots to be filled from elsewhere” (p. 143). Ellipsis, hence, can be viewed as a form of substitution whereby the presupposed terms are replaced by nothing. In other words, such items are omitted totally.

2.2.3.2.4 Conjunction

Halliday & Hasan identify five categories of conjunction: additive (introducing new elements); adversative (introducing new elements of opposite views); causal (introducing consequences or cause-and-effect relationships); temporal (introducing sequences or orders of events); and continuative (miscellaneous conjunctions or discourse markers which do not fall into any of the preceding categories) (p. 238). Conjunctive devices (e.g., but, yet, and, because, etc.) serve as visible links between two or more clauses or sentences, thus can appear both intra- and inter-sententially. The location of conjunctive items contributes to the semantic properties of a sentence or sentences.

2.2.3.2.5 Lexical cohesion

Lexical cohesion is the manipulation of lexical elements during text generation, involving the techniques of: (a) reiteration or using other words which are synonyms, near-synonyms, superordinates, or general words to refer to the same items previously mentioned, and, therefore, anaphoric in nature; (b) repetition or using the exact same words repeatedly in different parts of text to create mental links, to emphasise the significance of such items, and/or to achieve stylistic quality of text; and (c) collocation or using words which tend to appear together within the same lexical ecology to increase unity and fluidity of discourse.

It is noted here that although cohesive ties form an important part of coherence instruction, the study acknowledges that the inclusion of cohesive ties does not
necessarily make text coherent and that a detailed analysis of participants’ use of cohesive ties is beyond the scope of this study. The discussion will now turn to topical progression, another coherence mechanism taught during the intervention.

2.2.3.3 Topical progression

Topical progression forms a major part of topical structure analysis (TSA) which aims to determine how the writers’ ideas and propositions are semantically developed from one sentence to the next. Based on the original work by Lautamatti (1987), topical structure analysis “examines how topics repeat, shift, and return to earlier topics in discourse” (Schneider & Connor, 1990, p. 413). A discourse topic “often but not always coincides with the grammatical subject of the sentence” (Connor & Farmer, 1990, p. 128). Within a given text, the logical progression of the topical subject[s] or discourse topic[s] contributes to textual coherence.

Two major types of progression are proposed by Lautamatti, namely, parallel progression and sequential progression. An additional type, extended parallel progression, occurs when parallel progression is punctuated by sequential progression. Following Lautamatti, parallel progression, sequential progression, and extended parallel progression, are introduced to participants in the present study. In this thesis, ‘sentence topic’ is the same as ‘topical subject’ and ‘discourse topic’.

2.2.3.3.1 Parallel progression

Parallel progression is observed when a sentence topic or discourse topic in one sentence is repeated also as a sentence topic in the sentence which follows. The subsequent sentence keeps readers’ attention on the concept or topic presented in the first sentence and coherence is achieved as the sentence topics are semantically identical. Topics can be paralleled through lexical manipulation of repetition, singular/plural, pronominalisation and/or synonym (Schneider & Connor, 1990).

Example: Mary is such a lovely person. She is by far the nicest girl I have ever known. Mary has asked me to stay with her at her holiday home. She is taking me there this weekend.
2.2.3.3.2 Sequential progression

Within this structure, the sentence topic appears in the first sentence and is subsequently extended in a subsequent sentence based on the concepts of theme and rheme. According to Daneš (1974), “it is the theme that plays an important constructional role. The rheme shows its significance as the conveyor of the “new, actual information” (p. 113). From this perspective, the discourse topic is likely to be found in the theme (topic) whereas the elaboration of that topic is situated in the rheme (comment). Daneš’s view is adopted in this thesis.

In sequential progression, a noun or noun phrase in the rheme part of a sentence is used to begin the next sentence and therefore reappears as a topic in the theme segment. Using a hierarchical expansion technique, the writer elaborates the main sentence topic by adding sentences containing conceptually subordinate sentence topics.

Example: The survey result (theme) shows changes in food prices (rheme). Meat prices (theme), for instance, have shot up over 40% (rheme). Such a high increase (theme) has caused budgetary concerns (rheme).

2.2.3.3.3 Extended parallel progression

Extended parallel progression is a coherence mechanism in a composition where “a parallel progression may be interrupted by sequential progression” (Connor & Farmer, 1990, p. 127). As shown below, the discourse topics (James, He, James) are interrupted by another topic (It).

Example: James has gone home early. He has been sick all morning. He tried to concentrate on his most urgent project. It was something to do with the recent earthquakes. James managed to read through all the complaints before he left.

According to Lautamatti (1987), a coherent text privileges more frequent occurrences of parallel progression over sequential progression, “with few cases of extended progression” (p. 108). Following the work of Lautamatti, frequency counts of parallel, sequential and extended progressions according to TSA have been used to measure textual coherence (Phuwichit, 2004; Witte, 1983). Witte (1983) contends that learners’ understanding of topical progression contributes to meaningful revision and that
learners’ focused efforts during revision aimed at improving coherence promotes the quality of their essay writing.

2.2.3.4 Sociocultural perspective on textual coherence

To write coherently means to deliberately compose semantically-related sentences to form audience-responsive prose. The type of writing described here requires self-regulation. Self-regulated writers must have under their intentional control the syntactical, rhetorical and semantic complexities of writing that render it a system of signs. That is, the writers must make “use of these signs consciously and volitionally” (Vygotsky, 1987, p. 204). Furthermore, coherent compositions denote the dialectically and socially significant awareness of self, text, and audience. According to Vygotsky (1987), it is this awareness of others in the social world that allows the writers to anticipate the audience’s responses and to compose in light of that anticipation. As most compositions are rarely produced in the presence of the intended audience, keeping the audience in mind throughout the writing process is a deliberate act of higher mental functions from the author’s part so that the writing can “be maximally understood” (p. 204).

So far this section has articulated the three scientific concepts mediated during the research intervention based in Thailand. In the ensuing section, I present a sociohistorical account of the Thai EFL context and related studies, in keeping with the SCT notion of examining social behaviour in its historicity in order to “understand how mental action is situated in cultural, historical, and institutional settings” (Wertsch, 1991b, p. 15).

2.3 A sociohistorical account of the Thai EFL context

This section examines the Thai EFL context in its historicity and provides an overview of the culturally informed practice in L1 Thai literacy with reference to the teaching and learning of English as a foreign language. In this overview, I describe the roles of reading and writing in Thai literacy practice in both modern and ancient times. A collection of official documentation and contemporary scholarly studies provide information on specific aspects of Thai EFL practice. The significance of reading and writing in Thai culture and the roles of teachers and learners as defined by Thai culture are of research interest. This section concludes with Thai EFL strategy and composition research.
2.3.1 The history of English teaching

Thailand has never been colonised. Nor has it ever been a bi-lingual society. Nonetheless, English has long been regarded as the most prestigious foreign language throughout the Thai history where English is associated with greater employment prospects, socio-economically superiority, and advanced intellectual capabilities (Watkhaolarm, 2005).

Historically, English was exclusively taught to only the children of the royal and the diplomatic households, and in more recent times, it has become popular for children of affluent families to attend schools and universities abroad in order to acquire qualifications with English as the medium of instruction. Thai EFL students at large, however, do not generally have frequent contact with native speakers of English outside the classroom (Khamkhien, 2010).

Nowadays, English is almost synonymous with wealth and life opportunities. As a much-valued commodity, it is the most widely taught foreign language in Thailand (Watkhaolarm, 2005). English was introduced as a non-compulsory subject in secondary schools in 1895, included as an optional and supplementary subject to students at primary school level in 1909, made compulsory for upper-primary students in 1960, and assigned as an elective subject for primary schools and compulsory for secondary schools in 1980 (Khamkhien, 2010).

The Thai government has made explicit its intention to promote English proficiency among Thai people. The National Education Act 1999 has proposed an urgent and collective effort among education providers and stakeholders to ensure that Thai graduates have English skills necessary to succeed in modern economic environment (Office of the National Education Commission, 1999).

One major change in the Thai economic sector is through the Association of South-East Asian Nations (ASEAN). The Thai government has welcomed the ASEAN Economic Community (AEC) Trade Agreement which aims to abolish trade barriers and promote greater intellectual mobility in terms of labour and expertise among ASEAN nations from 2015 (ASEAN Secretariat, 2011). Thailand, as with the other ASEAN members, is being ushered into a new era of intensive regional market competition.
Never before in the history of Thailand had the nation been jolted by the need to use English brought upon by more active cross-border communication. Such need becomes more acute and urgent as it is underscored by the absence of English as an official language in Thailand. Sa-ngiamwibool (2012) notes, “Due to the socio-cultural, political, economic, religious, and linguistic differences among ASEAN country members and the lack of preparation, Thai people feel uncertain, insecure, threatened and rather pessimistic” (p. 54). English is an official language of ASEAN and those wishing to prosper in the ASEAN economic climate must improve their English proficiency. The Thai government has set a task of promoting this awareness among the Thais. Through various forms of media, similar messages urge people across the nation, and particularly those in the educational sector, to speedily equip themselves and their children and prepare for 2015 and beyond.

2.3.2 The nature of instructional practice and learning behaviour

The teaching and learning style in the Thai EFL context poses grave pedagogical concerns (Kaewnuch, 2008). By far the greatest influence on learning behaviour in Thai EFL classroom is the teacher. In Thailand, teachers are seen as the source of knowledge and the decision makers, while learners are regarded as subordinate in their position within this hierarchy of seniority and social order. Students are more inclined to follow the teacher’s lead and do not have a habit of questioning the teacher’s authority. Observing the power relation as defined by Thai culture, Tanasankit and Corbitt (2002), write:

Power in the Thai context is constructed not by influence or personality, rhetoric or education, rather it is created by position and the status associated with position and rank. Superior/inferior relationships are clearly defined by acceptance and implicit recognition of rank and status. Thai culture accepts that power relations are implicitly constructed in all organisations and at levels of Thai society by appointment to a position, title or status (p. 108).

Furthermore, the relationship between teachers and students is clearly defined by Buddhist doctrine, and the roles of teachers and students are firmly set within the classroom walls as well as in the wider community (Siengthai & Leelakulthanit, 1993). Teachers are respected for their position. Their superior social status in class qualifies them to make most decisions. Because of this deeply ingrained value within the Thai education system, it has been said that the system has inadvertently yet directly
suppressed learners’ ability to become analytical thinkers and robbed them of opportunity to become strategic performers (Kaewnuch, 2008). The learning process within the classroom walls is heavily dominated by the teachers who are seen to be doing their utmost best to keep up with the demands exerted by the curriculum. There has been little, if any, discussion of learning strategies in relation to goal setting and planning. Learners’ isolation and dependency on teachers is reinforced by the lack of opportunities to participate more fully in classroom interaction. Describing a reading classroom in Thailand, Conlon (2005) notes:

Classroom activities consist of the teacher reading the book to the students and asking them to complete the exercises in it. Any questions asked by the teacher are usually given as prompts in “the book”. Such questions are for “display”. Teacher-student interaction seems to be catechismic. The emphasis is not on finding out what the student knows, but on whether the student knows what the teacher and “the book” know (pp. 34-35).

From this description, reading means selecting and memorising specific content. In short, reading is not a tool for learning but is largely “a passive, detail-oriented study of texts” (Kaewnuch, 2008, p. 91). As well, most Thai learners continue to read a single text on a single topic. Furthermore, reading is not part of a cultural fabric in Thai society “even when the reading material is not in English” (Akkakoson, 2011, p. 7).

2.3.3 The absence of a reading culture

Compared with students in other countries, Thai students spend astonishingly less time reading as “the reading habit is not continuously developed in Thai society” (Kirin & Wasanasomsithi, 2010, p. 88). The absence of the reading culture in Thailand contributes to reading and writing difficulties when students pursue higher education (Strauss, 2008). Fundamentally, Thai EFL learners “do not regularly read fiction or non-fiction in English, even when they are highly motivated to improve their English for the purpose of examinations or in preparation for study abroad” (p. 1) and most Thai students are “reluctant to read” while “the standard reason given by teachers for this reluctance is that there is “no reading culture” in Thailand” (p. 2). According to Strauss, Thai EFL reading context is plagued by various problems arising from the absence of “reading in the home (in Thai but also in any other language), the nature of materials used and teaching methods at Thai schools and university (again in Thai and English), a dearth of reading material in English available through libraries and lack of reading ability” (p. 2,
parentheses in original). Similarly, Chomchaiya and Dunworth (2008) contend that reading instruction in Thai EFL classrooms fail to optimise the role of motivation to read expressed in abundance by Thai undergraduates.

The Nation, one of several daily English newspapers available in most Thailand’s major cities, printed the following.

To say that a reading culture is not one of Thailand’s strong suits is a gross understatement. Reading, either as a means of self-improvement or just pleasurable escapism, has never been associated with the idea of fun in Thai social context. Indeed, most Thais, if pressed, would admit that reading, a solitary activity, is the direct opposite of having a good time. People who read books are widely frowned upon as introverted, too serious, unsociable or lacking social skills. (The Nation, June 14/6/07, cited in Strauss, 2008, p. 10).

Disadvantaged by the lack of the reading culture in their L1 literacy practice, most Thais face learning difficulties when studying overseas. Investigating reading practices of Thai postgraduate students in an Australian university, Bell (2008) found that Thai students arrived “with little reading behind them and so it was difficult for them to link arguments and views presented in their current reading with previous readings” (p. 46). Many Thai students struggle to read multiple texts in order to write while studying abroad (Bell, 2011).

In addition, Thai learners tend to regard writing skills as less significant than other language skills in both Thai and English (Dhanarattigannon, 2008). The following excerpt is self-explanatory. Describing Thai EFL students in an English writing class, Kaewnuch (2008) states:

Learning EFL, you try as much as you can to stick to the rules your teachers give you, for fear that you will say or write something wrong, or that you will be a fool among your friends. Fear, shyness, and lack of confidence haunt you from the very beginning. . . . But it is not just your trying to stay safe in your comfort zone but also how your English teachers treat you that makes English a hated school subject, a subject you are forced to learn (pp. 2-3).

Kaewnuch further emphasises that a major portion of time and resources in the Thai EFL context is devoted to assisting students in mastering grammar rules and memorising vocabulary, while very little time and resources are allocated to promoting critical thinking and learning for development of personal and intellectual growth. Similarly, in addressing the need to improve English literacy among Thai learners in
preparing themselves for 2015 ASEAN, Foley (2012) notes that emphases on grammar and spelling continue at the expense of “explanations, discussions and arguments, [which] are not explicitly presented and analysed for their language features” (p. 3).

In similar vein, Conlon (2005) observes that it is extremely rare to encounter “a Thai teacher who asks students why they think something. One would be even harder pressed to find a Thai student coming out of the Thai school system who is willing to attempt to answer that question” (p. 35). As little emphasis is placed on facilitating thinking skills, it is not surprising to find most Thai students in writing class struggle to differentiate between facts and opinions, express their viewpoints, or to form a constructive and logical argument. Higher marks are usually given to papers with higher level of correct syntactic features and not ones with stronger rhetorical value, more clarity of the writer’s stance and/or more direct and inclusive writer-reader interaction. The nature of assessment also influences the nature of student’s written work. Thai EFL writers learn to write for the most part of their language learning career to display their knowledge of English, focusing on using correct grammar rules in order to get good grades. As well, their writing is aimed almost exclusively at their only audience, the teacher. Kaewnuch (2008) notes:

Students do writing assignments, submit them to their teachers, think that the work is over, and wait for grades. In my experience as student and teacher of Thai EFL writing, students are not taught to know when and why to write. They are not taught to assess an authentic rhetorical situation and produce an effective text. The Thai EFL writing classroom is still insufficient in teaching the social aspect of writing (p. 6).

Also, in the Thai EFL writing context, Thai learners almost always write for one specific purpose of passing their exams. Many students write without clear understanding of rhetorical structure, social implications and academic norms (Kongpetch, 2006). Moreover, teachers usually assign topics which “only draw out general facts and opinions” and when students are allowed to choose their own topics, they mainly narrate past experiences following their oral discourse tradition (Kaewnuch, 2008, p. 191). Narrative writing skills, however, are developed at the expense of argumentation practice and the lack of exposure sees a large number of Thai students unable to argue effectively. For instance, some students adopt the “middle way argument” approach, that is, “the writer resisting taking an absolute position and reframing the question so as to be able to acknowledge that both sides of a debate or controversy have value” (Srinon, 2009, p. 4).
Despite evidence that these students had developed their understanding of expository and discussion genres, their writing was influenced by cultural factors with regard to power relations and the desire to preserve social harmony (Srinon, 2009).

The fact that Thai students do not write critically may be partially explained by how writing was first introduced into the Thai literacy fabric. An example of writing as a means for record keeping and not as a thinking tool could be found in the history of the Thai writing.

2.3.4 The history of the Thai writing system

The history of the Thai writing system began in earnest when King Ramkhamhaeng invented the Thai alphabet in 1283 A.D., and the most well-known of the earliest Thai writing from the same era is the stone inscription now securely kept at the Thai National Museum in Bangkok (Danvivathana, 1987). The inscription serves to record historical events and contains “information of the biography of the kings of the Sukhothai kingdom (1237-1438 A.D.), a description of Sukhothai city and the customs of the country” (p. 21). Writing, in ancient Thai culture, meant recording and preserving knowledge for future generations.

In ancient times, only the royal children and young aristocrats were educated. The introduction of literacy thus took place entirely in a context far beyond reach for most commoners and more particularly females. Outside the palace, Thai males became accustomed to quasi-formal schooling through monkhood and had access to religious texts. Buddhism, thus, plays a significant role in Thai education (Jory, 2000).

2.3.5 The role of Buddhism in Thai education

In Buddhism, the Dharma, the truth of all things, is set out according to the teaching of Lord Buddha who through enlightenment is said to have discovered all there was to know about how to live happily and be at peace with the universe. The words of the Buddha were first memorised and later recorded in writing. Teaching, together with learning and discussing, the Dharma is “effectively an exposition of the truths which already lay in the canon, rather than an addition to, or improvement on the canon” (Jory, 2000, p. 355). This view of knowledge seems to have continued in today’s education. Further insights into the nature of knowledge, as contextualised in the late nineteenth-century Thai culture, are as follows:
Other fields of knowledge besides Buddhist scripture, such as the *tamra* or “manuals” on astrology, medicine, sorcery, law, and military science, for example, were founded on a similar ideal. Knowledge of each particular subject existed as a complete and fixed entity, usually have been “revealed” by a teacher in the distant past. Often conceived of as having originated in completeness and perfection, such bodies of knowledge could not be improved upon, and their transmission (through copying of manuscripts, and especially the teacher-student relationship) placed paramount emphasis on the preservation of their original form” (p. 355, emphasis in original).

And although modifications were sometimes made to the original scripts during the various accounts of copying and reproduction, changes were “explained as attempts to restore that knowledge to its original, perfect form as laid out by the first teacher” (p. 355).

The absolute authority of teachers in the Thai educational system can be traced back to association with the initial role of monks as instructors. Further, texts taught during that time were sacred ancient Buddhist scriptures, revered for their holiness. “Indeed, in religious texts the written word held sacred status by virtue of its religious referent” (p. 356). To these days, Buddhist monks show respect to the scripts by raising them to their forehead before and after chanting. This practice is also common in most Thai households where books are normally kept higher than head level. No Thais would stack books to use as a doorstop. In Thailand where using feet to communicate is considered the lowest in all manners, no Thais would point or touch any books with their feet. Even the library is seen as a solemn and sacred place by many Thais. Originally established to safeguard ancient Thai scripts from colonial threats, the purpose of the National Library was first and foremost to protect and preserve national treasures (Jory, 2000). As hundreds more libraries are opened across the country in later times, they are often viewed as storehouses of knowledge which remain serious and formidable for many locals.

Indeed, many Thais do not perceive reading as a social behaviour. The term ‘bookworm’ in Thai is often used to refer to an anti-social person who would rather bury their head in a book than participating in group socialising. The very few who read are often taken to be introverted and less apt in maintaining interpersonal relations. In contrast, individuals who are articulate and available to join group outings are considered more socially savvy. “Whether cultural life is lived through the ear or through the eye has far-reaching implications for the way society and its institutions evolve and the way texts
are created, treated, and interpreted” (Veidlinger, 2006, p. 407). As a means of socialising and communication, speaking and listening are more valued than reading and writing in Thai culture. In fact, the use of the term “bahussuto meaning one who has “heard much” to refer to knowledgeable individuals demonstrates the importance of oral communication and memorization” (p. 413, italics and emphasis in original).

The absence of a reading culture may in part be explained by examining the ancient way of teaching. Oral discourse appeared the most preferred way of communication both in and outside educational arenas. Furthermore, memorisation is regarded as a means to preserve knowledge, particularly in the religious sector.

The Pāli oral tradition has long been greatly valued in the Theravādin world, where monks are still trained to memorise copious amounts of Pāli texts by heart. Every Sutta commences with the phrase . . . “Thus have I heard”, an indication that the canonical texts were supposedly remembered by those lucky enough to have heard the Buddha preach, and were then passed on by word of mouth through the ages” (Veidlinger, 2006, p. 406).

While verbal preaching is the main method of spreading the words of the Buddha, “the writing of the texts is an important component of the veneration of the Buddha’s teachings” (p. 419). Writing, in this case, however, is not composing but copying, an act believed to help the copiers accrue spiritual merit. From this religious perspective, writing was aimed at preserving and keeping alive sacred words. The prevailing oral tradition in communication among Thais is also dominant in Thai compositions with excessive use of personal pronouns and “with a conversational tone and much vocabulary … normally associated with speech rather than writing” (Phuwichit, 2004, p. 29).

2.3.6 Thai EFL reading and writing research

This section presents Thai EFL studies not only to review this volume of research but also to present key characteristics of Thai EFL learners performing reading and writing at tertiary level. To maintain the scope of this thesis, only SCT-informed research and studies using speech or discussion to scaffold reading and writing are presented.

Piyanukool’s (2001) SCT-informed study explored the mediational role of discussion in EFL reading of 126 Thai university students. In this 10-week study, participants of similar proficiency were assigned to two groups: one group read and discussed with peers; the other read silently and individually. A post-intervention reading
test showed both groups obtained similar scores, although reading through discussion was reported to be more enjoyable than reading silently and alone. Piyanukool concluded that a longer intervention could have yielded a more statistically significant result.

More key findings from Piyanukool’s study shed light on the reading habits of Thai tertiary students. Survey questions also revealed that most students read slowly. Many read only one sentence at a time and relied heavily on seeking the meaning of unknown words from a dictionary. A small number of students (8%) translated what they read into Thai. Fewer than a quarter of participants reported wanting to read and discuss with other class members, and the most preferred mode of learning in a reading class was for the teacher to read with the class and ask questions intermittently. Further, twice the number of students favoured knowing the meaning of every word in the text over those who valued the knowledge of text structures. And more alarmingly, only 8% of students focused on finding topics, main ideas, or text structures.

Another research on reading was by Danuwong (2006) who investigated the role of metacognitive strategies following explicit instruction. Using survey questionnaires, think-aloud protocols, interviews and self-reports as research instruments, Danuwong analysed data from 74 students and 10 instructors from the faculties of Agricultural Sciences and Communication Arts of a provincial state university in North-East Thailand. Students from both faculties reported having used some reading and listening strategies with no clear justification and neither group of students were able to articulate their strategy use fluently. Although students demonstrated that they were able to use monitoring and evaluating strategies reasonably well, they were not skilled in applying strategies in planning and problem-solving processes. Furthermore, Danuwong found that participants tended to ignore strategies which had been modelled; they relied on the instructors to feed them with solutions to the learning problems. In some cases, the instructors “were likely to give assistance to their students or even take full responsibility of planning, monitoring and/or evaluating their student’s learning or practical sessions. Such highly instructive teaching was reflected in students’ responses” (p. 246). Danuwong also found that “most students only showed the responsibility to take charge of their own learning when assigned to do so under close guidance. This suggests that the lecturers do not explicitly acknowledge or facilitate the development of independent learning” (p.261). Such findings indicate not only the lack of self-regulatory practice
among Thai university learners during listening and reading tasks but also reflect the teacher-directed nature of Thai classrooms.

In a rare study combining reading and writing, Tapinta (2006) described four case studies selected from a group of fourteen students attending a five-week English for Social Science course. Two cases were of high proficiency students, while the other two represented the low proficiency group. Reading strategies introduced to the class were making predictions, generating questions, activating background knowledge, and drawing on text structures to aid comprehension. Additionally, participants were trained to brainstorm, draft, revise and edit their written work. Also, participants were taught metacognitive strategies of problem-solving, comprehension monitoring and evaluation of written work. Data from interviews, student discussion, and think-aloud protocols as well as strategy checklists, field notes and students’ written work indicated that unlike their less competent counterparts, more competent learners were able to use more elaborative strategies such as inferring, analysing author’s intention, and generating more comprehensive views for content. Additionally, three out of four selected case studies revealed that students were having difficulty generating questions during reading and that less competent learners’ attempts to apply strategies taught during this project were impeded by their lack of language skills. These findings are of particular interest to the present study which adopts self-questioning as a form of metacognitive strategy.

I now turn to Thai EFL composition research. To narrow the scope of the review, three composition studies which are not focused on grammatical mistakes and error correction are presented. The first study was by Kaewnuch (2008) who described Thai EFL composition classrooms as teacher-fronted and teacher-oriented, and viewed Thai EFL students as writers who did not “use writing as a medium for them to explore knowledge, to discover meanings for them to grow up in knowledge and spirit, and to transform their world” (p. 7). The participants were 48 Thai learners of English. Group discussion and writing of multiple drafts on self-selected topics through process writing, including paragraph building techniques and cohesive markers, were taught. Within twelve and a half weeks, the class covered 5 topics, each requiring participants to write 3 drafts. Also, in order to seek comments and improve their drafts, participants were encouraged to read, discuss, and consult their peers, the researcher, family members, other teachers, and even strangers. Following this intervention, Kaewnuch found that participants’ writing was ridden with lack of organisation, “dryness”, and “qualities of no
power” (p. 131). Nonetheless, through discussion, there was evidence that participants understood that textual power was derived from well-chosen words and how writers chose to express their opinions through metaphors and other ‘lively’ vocabulary and idioms.

Kaewnuch’s research is significant to the present study in that it offers a detailed description of the Thai EFL writing context and highlights the needs for Thai EFL teachers to perhaps consider alternative teaching methods. Kaewnuch reported that both teachers and learners in language classes across the country appeared to be working toward tests and exams and “the classroom emphasises a passive, detail-oriented study of texts” (p. 92) thereby memorising and retelling facts tended to be the goal of learning and very little flexibility or creativity was evident. And although not directly SCT-informed, the study made extensive use of collective scaffolding through speech as several discussions were required prior to submission of participants’ writing.

A similar study which moved away from the traditional Thai EFL focus on grammatical accuracy was by Dhanarattigannon (2008) who investigated how 41 Thai undergraduates responded to teacher-student discussion and student-student responses as scaffolding mechanisms. In this Vygotskian-inspired study, data from class observations, interviews and document artefacts showed that participants felt vulnerable when the teaching of grammar was absent as they believed lexical and syntactical difficulties underpinned their writing problems. They also produced writing that was poorly organised and their argument lacked logical development.

Dhanarattigannon also found that although participants gradually viewed the instruction more positively, participants were too shy to ask questions or to share their opinions and they “did not speak out to the teacher because it was considered rude” (p. 227), and therefore benefited little from teacher-student Q&A. This behaviour reflected participants’ cultural practice of “unconditional obedience to authority which can be seen both in the family and in the education system” (p. 223). Similarly, peer feedback was constrained by participants’ cultural belief and desire to maintain social harmony and not to hurt others’ feelings. Participants avoided being critical of others’ work. Also, as they “were trained to trust and respect the teacher as the expert . . . and believe that only the teacher could correct their mistakes” (p. 227), they did not feel confident enough to give corrective feedback to their classmates. Neither did they trust that their peer could do the job well.
Similar findings that Thai learners lacked revision skills and relied heavily on teacher feedback were also reported by Srichanyachon (2011) who examined three types of revision carried out by the teacher, peer and self. Participants were ten undergraduates who enrolled in an advanced English course and had been taught the five-paragraph essay format and peer-review. The task was to write, within 60 minutes, a 250-word essay on their five-year long-term goals, following a reading task from which participants gained topic familiarity although they were not required to base their writing on this text. Data from the essays, peer-response sheets and semi-structured interview showed that the participants lacked necessary sentence building skills and knowledge of coherence, had difficulty identifying or correcting errors in their own writing, and that their revision focused mainly on grammatical and spelling errors, whereas attention to organisation was relatively non-existent. Findings also revealed that, collectively for all 10 essays, the numbers of errors identified by the teacher and by peer were exceedingly higher than those identified by the participants themselves, totalling at 170, 42, and 19 errors respectively. It was also found that both self- and peer-revision focused primarily on spelling and verb usage errors while teacher-revision found most errors concerning sentence structure, punctuation and spelling. Notably, no revision concerning organisation was detected. Additionally, most participants favoured teacher feedback over peer-revision. Also, peer-revision was thought inadequate as the participants themselves did not have necessary proficiency. Similarly, self-revision was the least preferred means to identify errors or to guide the participants’ subsequent revision. The researcher concluded that teacher-revision was essential and peer-revision was relatively beneficial, whereas self-revision “appeared the least useful” (p. 7).

Also one of very few studies investigating the writing performance of Thai students, without focusing on grammatical or lexical accuracy, was by Srinon (2009). In this study, six Thai EFL university students were assigned to three groups of two according to high, middle, and low proficiency levels respectively. During this intervention, genre-based teaching of expository and discussion/argument genres included five consecutive complementary steps of building context, modelling, joint construction of text, independent writing, and linking related text. Following a six-week intervention, all students were able to produce expository text adopting features presented in the prototypes during training. At the end of another six-week training on discussion text, some students adopted generic features of model texts and used these in their writing,
while others did not follow the prototypes but offered advice as opposed to arguing for or against. Furthermore, findings revealed that some students adopted what the author called the “middle way argument” approach. That is, “the writer resisting taking an absolute position and reframing the question so as to be able to acknowledge that both sides of a debate or controversy have value” (p. 4). Srinon concluded that the writing of this group of participants was influenced by cultural factors and time constraint.

Overall, the sociohistorical account of the Thai literacy practice and the Thai EFL reading and writing research review present an overview of an environment far from conducive to cognitive development of the learners, as reading and writing are not carried out as a means to promote cognitive growth neither in Thai nor English. Despite being the most widely taught foreign language in Thailand (Khamkhien, 2011), English has not been successfully mastered or used by most Thai students either in school or work environments (Glass, 2008). Also, while highly publicised policies at a national level emphasise the important of the learner-centre approach (Khamkhien, 2010), scholarly investigations, however, present a less than desirable foreign language learning outcomes than those set out in the educational objectives of the National Education Act (Danuwong, 2006).

In this study the focus is on the role of the human mediator and formal instruction, but technology, including social media, may provide additional literacy opportunities for Thai learners in both formal and informal contexts. For example, Darasawang (2007) contends that, within a formal English learning context, the use of self-access facilities among Thai tertiary students appears successful, although she also notes that most E-resources are aimed at remedial learning. Little research specifically addresses the effect of informal technology and social media use on tertiary-level Thai student literacy practices, but it must be acknowledged that literacy extends beyond print, even if it is outside the scope of this thesis.

2.4 Summary

So far, this chapter has presented the sociocultural and activity theoretical positions, together with the SCT pedagogical approach. It has also discussed in detail key studies pertinent to the concepts of self-regulation, discourse synthesis, and argumentation. Also covered in this chapter was the sociohistorical overview of the Thai EFL research context. On the basis of the theoretical frameworks, issues raised, and the
gaps in literature discussed in this chapter, the present study seeks to answer the following research questions:

RQ 1: How do participants describe themselves as readers and writers of English?

RQ 2: How do participants construct their argument essay?

RQ 3: How do participants self-regulate as they interact with text and task during discourse synthesis?

RQ 4: What do the participants perceive themselves to have learned during concept-based instruction?

This chapter is followed by a detailed articulation of the methodology and the research intervention in Chapter Three and Four respectively.
CHAPTER THREE

METHODOLOGY

In this chapter, I will describe the methodology that guided data collection and
analysis. First, I introduce the research paradigm before presenting the microgenetic
method and case study design. I then discuss how activity theory is operationalised. After
this, I describe the context of the study together with participants’ profiles. Next, I outline
data collection procedures and the research instruments. Following this, I discuss data
management processes and explain key analytical decisions through the SCT theoretical
position. Finally, I discuss research trustworthiness and ethical issues before providing a
summary of this chapter.

3.1 Research paradigm

The present study adopts an interpretive/constructivist paradigm as discussed
below.

3.1.1 Definition

Guba (1990) defines a paradigm as “a basic set of beliefs that guide action”, and
regards a paradigm as an overarching orientation or a set of values or a person’s belief on
how knowledge of the world comes into being (p. 17). This paradigm guides the
adaptation and articulation of problems, instruments, and evaluation criteria within that
investigation (Creswell, 1994). In other words, the research paradigm governs the
researchers’ beliefs of how knowledge is generated, perceived and sustained. It is against
this paradigm that important decisions with regard to research designs and methodologies
are made (Lincoln, Lynham & Guba, 2011).

3.1.2 The interpretive/constructivist paradigm

According to Denzin and Lincoln (2011), “all research is interpretive: guided by
a set of beliefs and feelings about the world and how it should be understood and studied”
(p. 13). The interpretive paradigm contends that insights from one phenomenon or one
set of data is context-specific and thus usually applies only to the social context in which the research is situated, and that different researchers may hold different research assumptions, therefore, they may arrive at different understanding of the same research context. A set of research assumptions including the epistemological stance of the present study is presented below.

The present study is grounded in sociocultural theory and more specifically guided by activity theory. The research assumptions adopted in this study are as follows.

(a) The ontological assumption is that there exists multiple realities and these realities are socially constructed. This perspective is referred to by Lincoln et al. (2011) as a relativist ontology (p. 13).

(b) Further, the researcher holds the epistemological beliefs that socially constructed knowledge or realities are shared and maintained among individuals holding common world views, and that individuals are not only influenced by but also influencing their social environment. Lincoln, Lynham, and Guba (2011) call this view a subjectivist epistemology (p. 13).

(c) And thirdly, the methodological assumption held by the researcher is of emergent and recursive approaches, that is, the researcher does not approach the study in order to test predetermined hypotheses but allows insights from data to emerge through reiterative analysis, which is the defining characteristic of qualitative research methodology.

3.2 Qualitative research methodology

Crotty (1998) defines methodology as “the strategy, plan of action, process, or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcome” (p. 3). Methodology is thus a conceptual framework governing a researcher’s decisions on the research design.

According to Burrell and Morgan (1979), social sciences research often employs qualitative methodology. Creswell (2007) defines qualitative research as follows.

Qualitative Research begins with assumptions, a worldview, the possible use of a theoretical lens, and the study of research problems inquiring into the meaning individuals or groups ascribe to a social or human problem. To study this problem, qualitative researchers use an
emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is inductive and establishes patterns or themes. The final written report or presentation includes the voices of participants, the reflexivity of the researcher, and a complex description and interpretation of the problem, and it extends the literature or signals a call for action (p. 37).

The above definition effectively captures research characteristics, design, method, analysis and implications of qualitative inquiry which is essentially interactive and humanistic (Creswell, 2007). Qualitative inquiry seeks to describe behaviour within its context and capture developmental processes within natural activities (Lincoln & Guba, 1985) in order to understand multiple realities of social phenomena (Creswell, 2009). The understanding of these realities cannot be achieved if these realities were removed or divorced from their contexts. Qualitative researchers, thus, do not aim to investigate learning behaviour in isolation. Nor do they attempt to prove or test any hypotheses or compare/contrast learners’ performance with any other experimental or control groups as do quantitative researchers.

Qualitative analysis draws upon multiple perspectives and perceptions of the world held by participants and researchers. “Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry” (Denzin & Lincoln, 2005, p. 10). In making sense of human behaviour and the context in which the behaviour is situated, a qualitative researcher acknowledges the influence of his/her past experience, understanding, biases, values and beliefs (Denzin & Lincoln, 2005). Justification for adopting the qualitative methodology is as follows.

Vygotskian scholars view L2 classroom research as an investigation of a situated social and learning environment (Ohta, 2000). Sociocultural researchers focus on both the intermental and intramental spheres of human nature and do not aim to investigate learning and development in isolation from its social context. Sociocultural scholars regard development as a qualitative change and view learning and development as social processes which are neither accumulative nor predictable, but are, in fact, revolutionary and being continually modified and transformed in a non-linear manner (Vygotsky, 1978). These processes imply various stages of development and complex interactions between the learners and the mediational means in cultural settings, and between the various psychological processes themselves. It is not surprising that sociocultural
research tends to adopt “a holistic qualitative methodology which sheds light on learning processes as they occur” (Ohta, 2000, p. 53), and that most sociocultural studies are conducted and data presented using a microgenetic method of analysis within the case study design. The assumptions about the nature of development and the qualitative transformation of learning behaviour situate SCT inquiries within the qualitative paradigm.

This thesis is grounded within a sociocultural research tradition as outlined above. The microgenetic method is discussed below.

3.3 The microgenetic method

The present study is best described as a microgenetic multiple-case study qualitative inquiry. The microgenetic method lies within a family of genetic analysis advocated by Vygotsky (1978). The present study adopts the microgenetic approach as a method of analysis to investigate “development over the course of, and resulting from, particular interactions in specific sociocultural settings” (Wells, 1994b, p. 44).

Microgenetic research is referred to as “a very short-term longitudinal study” of “the unfolding of an individual perceptual or conceptual act” (Wertsch, 1985, p. 55), and is premised on “the assumption that it is possible to understand many aspects of mental processes only by understanding their origin and the transitions they undergo” (Wertsch, 1991a, p. 87). Lavelli, Pantoja, Hsu, Messinger and Fogel (2005) contend that microgenetic analysis is particularly suitable for “documenting change processes in development” (p. 40) when investigating learning behaviour of individual learners in particular contexts and that “observing and understanding changes at the micro-level of real time is fundamental to understanding changes at the macro-level of developmental time” (p. 42). As well, the microgenetic method is used mostly in research conducted to gain insights into how problem-solving and reasoning strategies are used (Chinn, 2006).

In short, the microgenetic method values a detailed description of what an individual participant is able to do in a learning event and how this learning behaviour can be interpreted in relation to cognitive and psychological change or development that may take place during single or successive episodes (Vygotsky, 1978). Microgenetic research requires intensive data collection within relatively short interventions (Lavelli et al., 2005), and is suitable for investing learning behaviour with regard to unfamiliar
learning concepts particularly strategy training (Kuhn, 1995) and problem-solving activities (Chinn, 2006).

### 3.4 Viewing L2 learning experience through activity theory

This study adopted activity theory as a framework to examine participants’ self-regulation in relation to their goals, actions and outcomes through participants’ engagement with language and instructional materials during a four-week explicit concept-based instruction on three scientific concepts, i.e., argumentation, discourse synthesis, and textual coherence.

In implementing the concept of activity, the researcher aimed to “examine individual actions, as well as the goals and history of those actions … to make visible and document the intricate and dynamic social processes of literacy practices” (Gutierrez & Stone, 2000, pp. 150-151). The need to take into account the role of sociocultural context is imperative as “an understanding of the community level accounts for how the social and discursive practices of the learning community shape what gets learned, who gets to learn, and how that learning is organised” (Gutierrez & Stone, 2000, p. 159). Furthermore, to understand participants’ possible qualitative development in a shared and socially-mediated context more holistically, the learning environment was regarded as the source of potential constraints (Engeström, 1999).

In this study, the researcher adopted Russell’s (1997) definition that an activity system is “any ongoing, object-directed, historically conditioned, dialectically structured, tool-mediated human interaction. Some examples are a family, a religious organization, a school, a discipline, a research laboratory, and a profession” (p. 510). The present study adopts mediated actions as the unit of analysis (Zinchenko, 1985). With the acquiring of academic writing skills classified as activity, mediated actions during the end-of-intervention reading-to-write task performed by individual participants is the unit of analysis for the microgenetic method. Microgenetic analysis was carried out and findings presented through a case study design.

### 3.5 Case study design

Merriam (1998) recommends a case study be “employed to gain an in-depth understanding of the situation and meaning for those involved. The interest [in the case] is in process rather than outcomes, in context rather than a specific variable, in discovery
rather than confirmation” (p. 19). As the present study is context-sensitive and does not aim to provide absolute answers (Merriam, 1998), case study design appears most suitable as “one that focused on descriptions of what people experience and how it is that they experience what they experience” (Patton, 2002, p. 107). Similarly, Yin (2003) suggests that a case study is particularly appropriate when the phenomenon under investigation is relatively unexplored and “especially when the boundaries between phenomenon and context are not clearly evident” (p. 13). These suggestions fit well with the Thai EFL tertiary reading-to-write context for which no known literature is available.

This study drew data from five participants and adopted a multiple-case design with each participant representing an individual case. Multiple case studies were chosen in an attempt to gain in-depth understanding of social realities and increase theoretical replication within the inquiry (Yin, 2003). Given that the study focused on microgenetic analysis of regulation of cognition during a reading-to-write task of each respective case, this study is best operationalised as embedded multiple-case inquiry. In presenting each of the five cases individually, the present study endeavours to describe a social phenomenon in which “the subjective experience incorporates the objective thing and becomes a person’s reality, thus the focus is on meaning-making as the essence of human experience” (Patton, 2002, p. 106).

3.6 Pilot study

As suggested by Yin (2003), a pilot study was conducted to trial the research instruments for robustness and suitability and to evaluate the appropriateness of instructional materials. The pilot study took place at a state-owned university in southern Thailand in July 2010. Upon receiving permission from the English Language Programme Director, the researcher visited a class of fourth year English-major students who had been studying reading and writing for academic purposes and were reported to be familiar with process writing. Six participants, one male and five females, were interested and gave informed consent (Appendix A) as they signed up for the project. Oxford Placement Test scores rated these six participants as modest users of English.

The pilot study followed the research design and procedures presented earlier in this chapter. Initially the study was supposed to take six weeks to complete. Following changes in participants’ timetables due to the approaching Muslim fasting period, the project was wrapped up in 4 weeks. Fortunately, all six participants were most
enthusiastic in attending all lessons of which they were informed upon signing up for the project. As participants had come from the same class, they followed the same timetables in most subjects, which meant easy rescheduling for the pilot study. Thus, although the number of weeks had been shortened, extra classes were added including evening and weekend sessions and participants received all training as initially planned. Appreciation for their time was expressed in the form of a specialised Thai-English dictionary on Applied Linguistics given to each participant upon project completion and several more copies of the same dictionary were presented to the library of the Language Centre.

The pilot study was found to be most useful in trialling research instruments and instructional materials, particularly the interview protocol, the coherence SCOBAl, and the post-project reading-to-write task. Interview questions were found to be answerable and appropriate to the research purpose. Among other findings, reported absence of goal-setting, lack of in-class discussion of strategy use, and no formal strategy training throughout participants’ EFL learning experience stood out in this pilot study. Interestingly, it also transpired that all six participants thought learning strategies, referred to as ‘magic tricks’ shortcutting all strenuous cognitive processes, came with natural ability needing neither training nor practice. In light of these findings, the researcher understood that, in the main study, the concepts of goal-setting and learning strategies needed more explicit mediation and rehearsal. Additionally, while participants in the pilot study had no problem using verbalisation strategy during the end-of-intervention reading-to-write task, the reading-to-write task itself proved to be more demanding than they had anticipated. Two out of six participants could only manage a couple of paragraphs rather than an essay within the one and a half hours allocated. Following these revelations, it was decided that all research instruments were valid and robust and, therefore, research instruments and procedures were to remain the same for the main study. However, because the length of writing and the time limit may have affected goal-setting and strategy use, in the main study, participants would be allowed to choose either to write a paragraph or an essay. They would be given 45 minutes to write a paragraph of at least seven sentences long, or they could choose to write an essay of 250-300 words within one hour and thirty minutes.

Another modification made in the main study was the inclusion of a Personal Information Questionnaire (Appendix C). Findings from the pilot study revealed that participants were not familiar with discussing their learning histories, goal setting, and
classroom behaviour during group and pair work. They reported not having been asked or invited to talk about themselves as learners prior to the intervention. All agreed that talking about their learning histories could have been made much easier if there had been some questions to help them recall. These findings gave rise to the design of the Personal Information Questionnaire to be included in the main study.

3.7 Setting of the main study

This research was carried out during a four-week period stretching over the months of August and September in the second semester of the 2010 Thai academic year at one of the state universities in southern Thailand. For ease of discussion, the university will be referred to as Centre University (pseudonym).

Ranked highly among Thai universities, Centre University is a university of choice for thousands of school leavers from all over Thailand. Established almost half a century ago, Centre University is an esteemed tertiary education provider with over 30,000 students enrolled in almost 300 undergraduate and postgraduate courses each year. The university also offers 18 international studies and three foreign language programmes. Undergraduate students at Centre University are required to take at least two English courses as part of their degree fulfilment, regardless of the disciplines they are pursuing.

At the Faculty of Liberal Arts where this study took place, most lecturers in the English Department are PhD graduates having acquired their doctoral qualifications mostly from England and the United States of America. The faculty also employs many native English speakers, although none of the native speakers was PhD qualified. English instruction is preferred in most language classes and several courses in the English Department are either delivered solely by these foreign lecturers or co-delivered by native English speakers working alongside Thai lecturers using English as the medium of instruction.

3.8 Recruitment of participants

Participation in this research project was voluntary. An email correspondence introducing the researcher and this project was sent to the English Department in late 2009 with the anticipation of the project commencing during the Thai academic summer vacation between the months of March-April 2010. Research information and selection
criteria were the two main issues communicated via the initial email correspondence. The selection criteria were that prospective participants must be tertiary students (undergraduates and postgraduates), studying English for academic purposes and possibly attending classes using English as the medium of instruction.

This introductory letter was well-received with the reply from Head of the Department giving a warm welcome and pledging all assistance she could offer. Unfortunately, the early 2010 political unrest in Thailand had prevented the progress of this project, and the researcher was not able to secure permission to travel from New Zealand to Thailand until the end of June. Consequently, data collection did not commence until the third week of August, causing difficulty in recruitment of participants.

In early July 2010 the researcher visited the campus and introduced the project to over 100 students collectively from two English courses. Those interested in the research were invited to a meeting after class. Research information and all ethical procedures were explained in both Thai and English to ensure that all was understood by prospective participants. A total of 12 participants signed up for the project aimed to commence in August. This group comprised seven undergraduates and five master’s degree students. Unfortunately, within the following two weeks, seven of the designated participants exercised their rights to withdraw from the project, citing unexpected heavy workload and peer pressure. It is important to note here that this first recruitment took place within two months of the first semester of the new academic year, at which time students had not had a clear understanding of the level of commitment they would be required to undertake for their normal study. Once the commitment became clearer to them, these students regarded the research project as extra burden unnecessary for their degree requirements.

As time drew closer to the starting date of the main study, the researcher visited the campus once more and met with two other groups of students. Unfortunately, the visit fell during a Muslim fasting period and many students were absent. Meanwhile, the English Department was extremely hospitable and had offered the researcher an office and access to a number of classrooms to be used during this project. All facilities were set to go but the number of participants was not big enough for the project to begin. In a desperate attempt to secure more volunteers, the researcher looked beyond the English
Department and introduced the project to another department within the Faculty of Liberal Arts, in the hope that students from non-English majors studying English as part of their compulsory degree requirements might be interested in the project. Thankfully, after a few phone calls, the researcher was informed that one engineering undergraduate student and a number of lecturers from another local university were very keen to participate in the project.

3.9 Details of participants

Initially, 19 participants signed up for the research project as a result of my second and third visits to the university. All participants were given research information including research purposes and requirements of tasks participants would be engaged in. All participants gave informed consent prior to project commencement (Appendix A).

Unfortunately only 14 of 19 participants were able to fit in with the agreed timetable. Following gradual attrition, and although many participants attended most classes, only five participants attended all sessions and completed all task requirements, effectively representing five multiple cases. This number was thought to be appropriate, following Creswell’s (2007) recommendation that four or five cases are appropriate for a single study. Upon project completion, each participant was given two bilingual (Thai-English) soft-covered paperbacks.

Participants’ biodata and learning histories presented here are drawn from their respective self-report Personal Information Questionnaire (Appendix C). Additional information is from the research notes based on class discussion in which participants were asked to introduce themselves when the group first met. Participants were invited to choose their own pseudonyms. The five participants below are introduced alphabetically according to their pseudonyms.

3.9.1 Case study I: Aoddy

At the time of this research intervention, 33-year-old Aoddy was working on completing his formal Marketing PhD proposal. Having enrolled in a PhD programme at a university in Malaysia, Aoddy was on study leave and had put his career as a business lecturer at a local Thai university completely on hold. Despite not having to deliver any lectures, Aoddy still lived a very hectic life, juggling his multiple roles of being a PhD
student, business lecturer, newspaper columnist, nationally recognised business consultant, accomplished writer, public speaker and father of two young children.

In his self-introduction in class, Aoddy stated that he lived locally about 20 minutes by car from the university where the intervention took place, and two hours away from his university in Malaysia. He travelled across the Thai-Malaysian border and spent 6 hours per week attending classes on marketing taught in English by Malaysian professors. Occasionally, Aoddy would be required to stay away from home for up to 5-7 nights in Malaysia so that he could attend PhD seminars and presentations.

The PhD journey had not been easy and Aoddy found himself struggling to communicate with his professors and fellow students. Having had very little need to use English academically prior to his PhD enrolment, Aoddy had not invested much of his time and money in learning English formally through private tuition, which is quite a common solution for mature students returning to a learning environment where English is essential. Most of what Aoddy had learnt and was able to use, to date, was from his high school years, and although he did attend several English papers as part of his Master’s degree, he did not excel and only passed these courses marginally.

3.9.2 Case study II: Aum

Aum was a 36-year-old female participant. She was a doctoral candidate in Business Administration majoring in Online Marketing. Like Aoddy, Aum enrolled at the same state university in Malaysia. Living in Thailand, Aum commuted to and from the university crossing the Thai-Malaysian border on the days of her lectures. At the time of the intervention, Aum was attending 3 courses taught by foreign lecturers. She spent a total of nine hours per week in class with English as the medium of instruction, dividing her time equally and working towards the completion of three papers entitled Marketing Strategy, Organisational Change, and Relationship Marketing.

Several years prior to this intervention, Aum spent over a year in America and acquired her Master in Business Administration degree from an American university. Despite this achievement, Aum did not believe she was a competent user of English. While Aum possessed and demonstrated a considerable degree of fluency in social English, as was evident during class discussion, she stated that since her return from
America, she had not had many occasions to use English in her daily life and believed she had lost most of her academic English knowledge and confidence.

3.9.3 Case study III: Chubby

(Bearing no negative connotation and translated in Thai as ‘cute and cuddly’)

Chubby was a 19-year-old first year computer engineering student. At the time of this research project, Chubby was attending a two-hours-a-week foundation English course delivered in English by a Thai lecturer. The course emphasised communicative language use and focused heavily on improving students’ speaking and listening skills. Chubby had been able to actively participate in this course, drawing on her overseas experience as she had spent the previous year at a high school in Rotorua, New Zealand. Upon returning to Thailand Chubby enrolled in the same engineering degree with her younger brother. In class discussion, Chubby reported that she noticed the difference in their English proficiency levels. She was more advanced than her brother in all aspects of language use. Having shared almost every other aspect of their lives, Chubby attributed her more advanced English skills to the benefits of having been abroad in a total immersion learning environment.

3.9.4 Case study IV: Mathew

Twenty-two years old Mathew was in his final year of his BA degree majoring in Language for Development at the time he joined this research project. The main English paper Mathew attended was an English Seminar course with five hours of lectures per week. In his self-introduction, Mathew said he was tri-lingual, speaking English and Chinese as his second and third languages. While Mathew saw himself as an average student, he was an active student in my class and was able to confidently engage in class discussions on various topics giving the impression that he was well-versed in many conversational topics and expressing a keen interest in what other participants had to say during pair and group work.

3.9.5 Case study V: Rose

Rose was 21 years old when I met her in 2010 and was in her third year of her bachelor degree, majoring in Language for Development. At the time of the research project, Rose was taking three English courses: Note-Taking & Oral Presentation,
Advanced Reading, and Advanced Writing, all requiring equal time commitment totalling nine hours of lectures per week. This, according to Rose, was not as heavy as her English courses taken in the previous year in which she attended up to 21 hours of English classes each week. In her self-introduction, Rose stated that she had completed a number of writing courses and was familiar with the concepts of process writing and textual coherence. Rose indicated that she particularly favoured brain-storming as a pre-writing technique as she often felt inundated with too many ideas all at once.

3.10 Data collecting procedure

The present study employed seven research instruments for the purpose of data collection. These are the Oxford Placement Test, questionnaires, participant-produced artefacts, reading-to-write essay, self-reflection form, semi-structured interview, and verbal protocol (verbalisation). The following paragraphs discuss these research instruments and how they contributed to the data collection procedure.

3.10.1 The Oxford Placement Test

The Oxford Placement Test (OPT) was administered on the first day of the research project to assess the English proficiency of the participants. The OPT contains two subtests of listening and grammar sections. The section consists of 100 items and takes about ten minutes to complete. Test-takers listen to a recorded voice of a native speaker of English and complete a phonemic discrimination task, choosing between two options provided for each test item. Each item is heard only once. The grammar section takes about 50 minutes to complete and contains 100 multiple-choice items, each requiring test-takers to fill in a blank choosing from three options provided. Test scores can be rated against the OPT rubric to identify test-takers’ English proficiency levels.

According to Moll (1999), the listening section of the OPT “is primarily a test of reading and listening skills, in which the learner's performance is dependent on knowledge of the sound and writing systems of English” (p.119). As the test does not include a writing component, a supplementary writing task was added as part of data collection. Participants were asked to write a short paragraph on writing difficulties. Their writing formed part of the baseline data on their English proficiency.
3.10.2 Questionnaires

As noted by Chamot (2007), a questionnaire is the most widely used self-reporting method in strategy-based research. On the first day of the research project, two sets of self-reporting questionnaires were administered, one to elicit data on participants’ awareness of their use of metacognitive strategies and the other on personal information and learning history.

1. Metacognitive Reading Strategies Questionnaire (MRSQ, Appendix B) containing 22 items, with a five-point Likert scale (Never Use, Rarely use, Sometimes Use, Often Use, and Always Use). Devised by Taraban, Kerr & Rynearson (2004), the MRSQ examines analytic-cognitive (such as evaluating reading goals and making inferences) and pragmatic-behavioural (for example, underlining or highlighting text) components of strategy use.

2. Personal Information Questionnaire (Appendix C). Initially, this questionnaire was aimed at mediating participants’ recollection of their English learning experience prior to the intervention. The design of the questionnaire came about as participants in the pilot study appeared unable to discuss their experience unaided. This gave the idea for the researcher to devise a mediational tool to assist participants in the main study. Initially, the questionnaire served as an ice-breaker during the first session. As well as mediating class discussion, the questionnaire was later regarded as one of the research instruments owing to the richness of data recorded. The Personal Information Questionnaire consists of nine sections. These are biodata, language spoken, English background, English subjects/courses attended this term, learning behaviour (as an individual in class), pair and group work (attitude and role as a group member), English language learning problems, key areas to improve, and additional comments.

It was explained to participants that the questionnaires and the OPT were part of data collection procedure aimed at gaining understanding of their current language proficiency and awareness on strategy use and, therefore, would not count for any marks or part of any assessments of their academic performance.

3.10.3 Participant-produced artefacts

During the intervention (discussed in detail in Chapter Four), participants completed several collaborative tasks which culminated in individual work. For example,
during their read-and-discuss tasks, participants shared their opinions on the definition of learning strategies and on the coherence SCOBA and additional notes (Appendix F). They also read a short paragraph written on the board by the researcher and discussed whether the text was coherent. Some of these tasks required participants to produce short texts as a means to articulate their conceptual understanding of the activities and tools involved. For example, participants discussed the meaning of strategy and wrote down their understanding of this concept individually. In another instance, participants worked in pairs using the coherence SCOBA to analyse a model text (Appendix G). Following this, participants described their understanding of the SCOBA in their own words. Several short texts produced from these class-based activities were collected by the researcher. These were Understanding of Strategies (US), Writing Difficulties (WD), and Evaluation of Coherence SCOBA (EC). These written artefacts served as one of the many data sources in this study.

3.10.4 Reading-to-write essay

Although the final reading-to-write task was carried out individually, throughout the intervention all participants engaged in collaborative learning through pair and group work as well as whole-class discussion. Following group work and pair work during the project, participants worked individually and were video-recorded during this task performed on the last day of the teaching sessions. The researcher devised the final reading-to-write task aimed at eliciting participants’ responses on child-smacking (Appendix L). The underlying assumption made by the researcher was that the task would be completed based on each participant’s orientation and attitude towards the issue of child discipline, taking into account the content of the source texts as well as, and not less important, their personal beliefs in relation to the cultural aspects, societal rules and institutional views on the issue under discussion. All three texts provided for this task posited an opposite view of child discipline to that of the Thai and English proverbs of “Spare the rod, spoil the child” presented in the task prompt. Details of the lessons and activities during the research project, including justifications for the source texts used in the final reading-to-write task are presented in Chapter Four.

3.10.5 Self-reflection form

A reflective journal is regarded as a suitable means of allowing participants to regularly reflect on their self-perceived performance (Janesick, 2000). In this study, all
participants were asked to reflect on their own learning and particularly on strategy used each time they completed a reading-to-write task. In a ten-minute unsupervised period immediately after the task, participants wrote down their self-assessment on task performance and strategy application, using a form provided (Appendix M). The advantages of a simple reflection such as this were two-fold: (a) participants were not required to attend to yet another lengthy cognitively-demanding writing task and; (b) data collected from this brief exercise offered rich and frequent self-evaluation information which could later be analysed in conjunction with audio-recorded verbal data. During this reflection, both Thai and English were permitted for participants’ ease of expression. The content of this reflection later formed part of a discussion following the semi-structured interview at the end of the intervention.

3.10.6 Semi-structured interview

Interviews are widely used in qualitative research together with other forms of participant observation (Creswell, 2005). Interview formats as research instruments to elicit data for analysis purposes comprise a wide range of types and dimensions from strictly formal, predetermined and scripted questions to questions arising during the interview (Fontana & Frey, 2005). Yin (2003) recommends open-ended questions be used in case study interview. Using open-ended questions, avoiding repeated probing, showing interest in potential data, and encouraging informants to elaborate on a topic are regarded as good interviewing techniques (Brenner, 2006).

In this study, each participant was interviewed once upon project completion. This semi-structured interview was carried out “with the intention of taking each respondent through the same questions, with essentially the same words” (Patton 2002, p. 342). While the initial questions remained the same for all participants, the answer to each question varied and, depending on participants’ responses, could lead to more questions being formed as the interview progressed. The nature of each interview fitted what Fontana & Frey (2005) call “negotiated text” whereby options remained flexible throughout the interview to facilitate participants’ freedom to convey information sought by the researcher (p. 716). The interview protocol contained 30 questions (Appendix D), divided into three parts. Part A explored participants’ self-regulation, goals, motivation and self-efficacy. Part B and C examined metacognitive reading strategies and metacognitive writing strategies respectively. All semi-structured interviews were
completed in the last week of the research project, during which time the researcher and each participant also had an opportunity to compare notes and clarify any issues of concern from participants’ self-reflection form. All interviews were video-recorded. Each interview lasted approximately 70 minutes.

3.10.7 Verbal Protocol

Verbal data has long been used in SLA research to investigate learners’ thought processes. As human cognitive operation, or put simply how the brain works, is not directly observable, most researchers rely on participants’ self-reporting mechanisms, most commonly used and known as think-aloud or verbal protocols. These data are thought to reveal participants’ cognitive operation during a task. Verbal protocols are usually tape- and/or video-recorded, systematically coded, and rigorously analysed so that insights into learners’ cognitive functions can be gained. The following paragraphs present two very different interpretations and the use of verbal data from learners’ verbalisation from the mainstream SLA and the SCT perspectives.

Cognitive and constructivism scholars regard verbal protocols as a means to access learners’ thinking processes. From this view, learners are asked to think aloud to describe what is going on in their head during tasks. What learners say is believed to be closely mirroring what they are attempting to do in completing the task at hand. According to Ericsson and Simon (1993):

The standard method for getting subjects to verbalize their thoughts concurrently is to instruct them to ‘think aloud’. With this instruction subjects verbalize new thoughts and generate intermediate products as these enter attention (preface, xiii).

Ericsson and Simon argue that a think-aloud protocol does not interfere with learners’ cognitive processes (p. 9). As the protocol draws its input readily available from subjects’ short-term memory, it does not involve memory retrieval or the need to gain access to long-term memory. Subjects then display the awareness of their cognitive function through verbal reports, giving detailed moment-by-moment oral output. According to Ericsson and Simon, in studies where subjects are simply asked to verbalise their thoughts as these thoughts come into being and are not required to explain their behaviours, think-aloud activities do not influence or alter thought sequences of the subjects in any way. Thought patterns are, however, affected if subjects are asked to justify or explain their thinking and actions. This interference occurs because the extra
task of having to explain their mental process adds more pressure and extra mental responsibility on the subjects. While continuing to strongly advocate the application and benefits of concurrent verbalisation during task performance, Ericsson and Simon recognise that, in some cases, the use of think-aloud protocol is brought under scholarly scrutiny and criticism typically regarding its effectiveness in terms of accuracy and completeness as think-aloud data may contain indiscriminating, incomplete, circular, questionable, and fragmented statements.

From a sociocultural perspective, verbal protocols are social artefacts imbued with social intent and meanings (Smagorinsky, 1988; 2001). Arguing from a cultural historical activity theoretical perspective that assumes that all cognitive activities are socially situated and that speech is a psychological tool mediating human social interactions, Smagorinsky (2001) rejects the notion that verbal reports serve no communicative intent as proposed by Ericsson and Simon. In the present study, communicative intent is taken to be self-directed, that is, participants verbalise in order to communicate with themselves on a self-to-self basis. The purpose of such communication was to regulate their cognitive functions. That is, language serves “the intrapersonal function of communicating with the self for the purpose of mediating mental behaviour” (Apple & Lantolf, 1994, p. 437). This being said, the absence of other social interlocutors during their reading-to-write task, nonetheless, is by no means absolute as “social factors are part of any environment, even when other people are not present, due to the artifactual nature of social settings” (Smagorinsky, 2001, p. 237).

Similarly, Swain (2006a; 2006b) views verbalisation as a psychological tool, a change agent capable of regulating and modifying cognitive processes, and a mediational means enabling cognitive activities as opposed to being merely a mode of communication. Verbalisation is regarded “as a tool that enables changes in cognition. Speech serves to mediate cognition. Initially an exterior source of physical and mental regulation, speech takes on these regulatory functions for the self” (Swain, 2006b, p. 100, emphasis in original). As a psychological tool, verbalisation enables the creation, retention and reflection of ideas. As a change agent, it permits more meaningful examination and manipulation of language aspects by the learners, promotes noticing and attentive focus, and thus leads learners away from superficial learning. As a mediational means, it enables self-regulation to take shape within the learners’ ZPDs. Furthermore, verbalisation as a semiotic tool is instantiated during a “coming-to-know-while-speaking
phenomenon” (Swain, 2006a, p. 97) whereby learning becomes explicit and “visible as learners talk through with themselves or others the meanings they have and make sense of them” (p. 95). In this thesis, as participants read in order to write, they used self-questioning and self-instruction as their main strategies. Verbalisation thus aimed to mediate their learning and regulate their cognition so that they “developed a more accurate, complete and deeper understanding” of what they read and wrote (p. 97). In light of the SCT view on verbal protocols as proposed by Smagorinsky and Swain, participants’ act of reading together with writing was thus dialogic, social and transformative. In the present study, verbalisation serves as research instrument, strategy and data. Unlike mainstream SLA research which seeks to minimise the reactivity or unwanted effects verbal protocols may have on learners’ cognition, the present study seeks to describe evidence supporting the positive effect of verbalisation on participants’ cognitive functions.

At the beginning of the research project, participants were given training on verbalisation during tasks. Verbalisation training (Chapter Four, Section 4.7.1) included three tasks from familiar topics to an academic topic covering (1) planning a trip to visit a friend, (2) classifying animals for domestic, scientific and industrial purposes, and (3) reading and writing in response to a scholarship advertisement. The training entailed both extensive modelling and practice, using STI-based stage-by-stage concept formation approach. Schematic diagrams, materialisation in the form of synthetic models of animals and an authentic scholarship flyer were used. Also, participants were encouraged to use verbalisation where applicable throughout the project.

In this study, participants were asked to use verbalisation individually and in pair and group work throughout the research project, and, more specifically, while performing a discourse synthesis task in a non-test condition at the end of the intervention during which time participants were video-recorded. To minimise possible adversary effects audio-visual equipment might have on participants’ task performance, the researcher made a point of having a Sony Handycam camera set up on a tripod in every session from the very first meeting to the last session throughout the research project whether or not the recorder was in use. Further, many of the teaching lessons were in fact recorded. Following this practice, the recording equipment became part of classroom furniture. As can be seen on recorded data, there is no evidence to suggest that participants were affected by the presence of the recording apparatus.
3.11 Data analysis

Data analysis involves multiple processes by which the data are reduced, organised, and interpreted. Patton (2002) states:

The data generated by qualitative methods are voluminous. I have found no way of preparing students for the sheer mass of information they will find themselves confronted with when data collection has ended. Sitting down to make sense out of pages of interviews and whole files of field notes can be overwhelming. Organizing and analyzing a mountain of narrative can seem like an impossible task (p. 440).

Confronted by a seemingly impossible task as regarded by Patton above, I focused on three developmental domains suggested by Negueruela (2003): definition, discourse, and verbalisation, in order to examine “L2 development as a conceptual process” (p. 166). I then organised my data accordingly. In what follows, I describe these three types of data.

3.11.1 Types of data

3.11.1.1 Definition data

First, definition data contained statements made by participants with regard to their conceptual understanding of the learning concepts mediated during the research intervention. Whereas Negueruela collected definition data prior to the STI instruction in written form, in the present thesis, definition data were both written and spoken and derived from the semi-structured interview data, classroom-based artefacts produced by participants, and part of their verbalisation whereby conceptual orientation specifically focused on participants’ conscious theoretical knowledge.

3.11.1.2 Discourse data

Second, discourse data were derived from five sources: the self-reflection form, MRSQ, Personal Information Questionnaire, classroom-based artefacts, and argument essays. Essentially, the first four were complementary to the argument essay data and were used to triangulate findings from the essay data analysis to which analytical primacy was given.

The essays were analysed to determine the essay argument structure based on the Toulmin’s model. First all essays were coded to identify the argumentative elements by
the researcher and a second coder who was a Thai lecturer recently graduated with a PhD in Linguistics from Otago University. Both coders coded the essays twice before comparing the results (Appendix S for coding guidelines). Discrepancies were resolved through live discussion via Skype. Following this process, I focused on the functional purpose of the argumentative statements and the overall functions as these sentences were combined into paragraphs. To analyse key rhetorical features, each essay was examined at the sentence and paragraph levels individually and chronologically. More specifically, I focused on how each writer built their argument, how they interacted with the audience, and how they used strategies and techniques to create a coherent argument and to appeal to the readers. Also, the analysis focused on each section of an essay to determine whether the essay contained an introduction, multiple-paragraph body, and a conclusion. Also of interest during this stage was to examine whether each section was suitably composed for communicative purposes or functions as well as its rhetorical appeal and strategies. For instance, the introduction serves to provide background information, contains a thesis statement, and draws attention to the topic to be discussed. The middle body paragraphs serve to elaborate the writer’s position and the conclusion summarises key points and draws the essay to closure.

During the argument structure analysis, both desirable and unsatisfactory features or each essay were noted. These features served to scaffold a more detailed examination of participants’ self-regulation in the microgenetic analysis of the video-recorded data during the reading-to-write task. Through this initial identification of strengths and weaknesses of participants’ text, I was able to analyse participant’s verbalisation and actions to identify the presence or absence of self-regulation and the various degrees of its manifestation.

3.11.1.3 Verbalisation data

Verbalisation data from the actual oral articulation accompanying the reading-to-write task were transcribed verbatim by myself. Care was taken during the transcribing process to capture a precise and accurate account of the behaviour under observation, including pauses, non-lexical vocalisations, non-verbal expressions, and paralinguistic features. The transcript convention was adapted from that suggested by Manchón, Murphy and Roca de Larios (2005) who used an “ordinary writing system” and systematically italicised and underlined text segments for detailed inspection (p. 198).
Participants’ verbalisation transcriptions were subject to microgenetic analysis. To the best of my knowledge, no microgenetic coding scheme for self-regulatory behaviour aided by verbalisation of an individual adult learner engaging in a reading-to-write task is available. I, therefore, sought to align my data management of the participants’ verbalisation data to theoretical underpinnings of the study as informed by the SCT literature and more specifically, activity theory. The discussion pertaining to the management of verbalisation data warrants a new section in this methodology chapter.

3.11.2 Managing verbalisation data

In order to clarify the data management process I will address some aspects related to the theoretical underpinnings of verbalisation and the role it played in this thesis. Note that verbalisation was introduced as a learning strategy to promote participants’ self-regulation.

In this study, verbalisation was deliberately introduced, modelled, and rehearsed, and was intended to play a mediational role in participants’ performance during reading-to-write processes. Following the initial pair work and group work throughout the research project, each participant carried out his or her own end-of-intervention reading-to-write task from which verbalisation data were derived. Therefore, utterances produced by each participant completing the task alone were taken to be private speech directed to self for the purpose of self-regulation during intrapersonal behaviour. Wertsch (1979) maintains that regulatory properties of self-directed speech can be observed in “how this speech aids in the formulation and execution of goal-directed actions” (p. 90). Self-regulated statements through verbalisation containing self-questioning and self-instruction were regarded as metacognitive. Other statements which did not constitute self-questioning or self-instruction but reflected metacognition at play, for instance, when participants commented or evaluated their actions, were also recognised as self-regulatory statements.

Initially, I had thought of tallying up a list of self-regulatory statements from participants’ verbalisation and mapping the strategies to some well-triailled taxonomies, but as “the object of analysis is neither texts nor minds nor conceptual schemes per se but what is in between--the social intercourse” (Russell, 1997, p. 509, parsing in original), I decided to abandon the task of identifying, indexing, annotating, and characterising self-questioning and self-instruction in order to create a list of strategies as commonly seen in
quantitative research. I turned my attention to tool-mediated action and repeatedly viewed
the video-recorded visual data in conjunction with the transcripts, attentively seeking
evidence of purposeful and meaningful application of self-questioning and self-
instruction. Through repeated viewing, I examined participants’ verbalisation in relation
to corresponding actions on video footage so that I could “examine how these verbal and
motor streams of behaviour are related to each other as well as how their interaction
relates to the differential outcomes” (Roberts, 1979, p. 296). In other words, participant’s
self-regulation was examined historically.

3.11.2.1 Situating verbalisation analysis within the SCT theoretical framework

Having repeatedly interacted with the transcripts and video footage, I reflected on
my chosen method of analysis, the microgenetic method. According to Vygotsky (1978),
“The search for method becomes one of the most important problems of the entire
enterprise of understanding the uniquely human forms of psychological activity. In this
case, the method is simultaneously prerequisite and product, the tool and the result of the
study” (p. 65, italics in original). “For Vygotsky, the transition from inter-subjective to
intra-subjective psychological processes by means of cultural mediation became the focus
of analysis” (Stetsenko & Arievitch, 2004, p. 66). I then focused on understanding
participants’ transformative psychological processes. As I was “not interested in milking
every linguistic quirk out of the data, … but in conducting a coherent and systematic
micro-analysis of individual discourses” (Frawley & Lantolf, 1985, p. 25), I came to
understand that meaningful analysis using microgenetic method as a tool, process, and
product could be achieved by segmenting my data into ‘chunks’ or microgenetic episodes
(Antón, 1999; DiCamilla & Antón, 2004).

A microgenetic episode refers to “the behaviour involved in carrying out goal-
directed actions” (Antón, 1999, p. 315). At this point, I applied the definition and function
of verbal self-regulation through verbalisation as described by McCafferty (1994a), that
is, “the functional role of cognitive and metacognitive strategies as described in the L2
literature is also characteristic of private speech” (p. 428), and decided not to map
identified strategies used by participants onto established taxonomies used by other
researchers as I previously planned. I then faced with the task of setting the parameter of
each microgenetic episode and was guided by five sociocultural theoretical primacies: (1)
the interrelatedness among psychological processes (Vygotsky, 1978); (2) the three
functional dimensions of an action, namely, orientation, execution, and control (Gal’perin, 1969); (3) goal-directed actions of an activity (Leont’ev, 1981); (4) the concept of irreducible tensions between the individuals and the mediational tools (Wertsch, 1998); and (5) the progression of self-regulation within participants’ ZPDs (Aljaafreh & Lantolf, 1994). I shall discuss how these notions informed my analysis of verbalisation data in the ensuing paragraphs. Note that the key theoretical positions are intertwined and as such they informed my analysis in the manner in which they interact; that is, they penetrated my analysis as separate conscious theoretical positions and yet interconnected and integral in their application.

3.11.2.2 Examining data at the level of actions (Gal’perin, 1969; Leont’ev, 1978; Zinchenko, 1985)

According to Leont’ev (1978), deliberate actions are carried out in order to achieve pre-determined goals. These actions are imbued with strategic intent and therefore do not occur haphazardly. For this study, I adopted “tool mediated action as a unit for the analysis of mind” (Zinchenko, 1985, p. 100). Examining mediated actions “permit[s] the investigation of the relationship between a specific psychological function (or process) and the entire life of consciousness and to the various critical functions of consciousness” (pp. 98-99). For the purpose of this study, actions could be preceded by, accompanied by, or followed by verbalisation. In examining data for goal-directed actions mediated by verbalisation, I focused on instances of actions and verbalisation in which participants negotiated task demands where no immediate solutions were present within the stream of the activity. The focus was to examine whether verbalisation led to solutions, what steps participants took to arrive at the solutions and whether participants relied on external source(s) to overcome the problems.

From an activity theoretical standpoint, actions are examined at the level of goals, and operations at the level of conditions. Data on actions and operations are drawn from participant’s performance during the reading-to-writing task. It is noted here that verbalisation data were examined at the level of actions. Coding for operations as automatised behaviour is not feasible from Systemic Theoretical Instruction and concept-based instruction theoretical standpoint (Gal’perin, 1969; 1989). In contrast to Leont’ev’s view that operations are routinised and automatic, Gal’perin views conscious operations as goal-sensitive and essential to concept internalisation (Haenen, 1993). Only when the
concepts have been fully internalised can operations become automatic and no longer subject to volitional control of the actor.

In this thesis, participants’ interactions with mediational tools are coded as operations. The mediational tools were the instructional materials provided for the completion of the reading-to-write task. These materials were the instruction sheet (IS), source texts (A, B, and C), coherence SCOBBA (CS), Toulmin’s Model (TM), self-questioning list (QL), self-instruction list (SL), and the argument essay checklist (AC). Added to this list were participants’ earlier drafts (BS = brainstorm, D1 = first draft, D2 = second draft, and D3 = third draft). Participants’ self-regulation was discerned through their verbalisation, actions and operations. The use of superscripts at sentence beginnings indicates the type of mediational means participants were interacting with at the level of operation.

3.11.2.3 Examining actions at functional levels

In examining unfolding developmental behaviour, Vygotsky (1987) warns against decomposing the phenomenon under investigation:

A psychology that decomposes verbal thinking into its elements in an attempt to explain its characteristics will search in vain for the unity that is characteristic of the whole. These characteristics are inherent in the phenomenon only as a unified whole. When the whole is analyzed into its elements, these characteristics evaporate (p. 45).

In the present study, the primary verbal data were derived from individuals performing a reading-to-write task alone. I examined the interplay between participants’ verbalisation and participants’ tool-mediated actions to determine the nature of participants’ self-regulation. Due to the limitations of SCT research on the topic of self-regulation of individual adult learners completing an integrated reading and writing task alone, as well as keeping in mind the research questions, I consciously applied self-questioning as a means to regulate my interpretations of data. Through repeated viewing of the video-recorded behaviours and multiple rereading of the transcriptions, I satisfied my pedagogical commitment to Gal’perin’s (1969) Systemic Theoretical Instruction and examined actions according to their three functional dimensions of orientation, execution, and control (Poehner, 2008). As I began the task of tentatively breaking down the data into meaningful chunks, I located possible microgenetic episodes in the transcriptions leaving verbalisation in its context. In other words, although each transcription was
broken down, the data segments remained contextualised and significant enough to facilitate meaningful interpretation. Keeping in mind ‘goal-directed and mediated action’ as the unit of analysis, I segmented words, phrases and sentences encapsulating potential manifestation of self-regulation or voluntary problem-solving decisions demonstrated by participants into microgenetic episodes (excerpts).

3.11.2.4 Examining functions in the reading-to-write context

Next, to avoid treating actions as discrete behavioural units and to account for the complexity of the cognitive and psychological processes involved in reading-to-write, I examined actions and their functions in context. This required a close examination of actions in relation to the writing sub-processes and in conjunction with the deliberate inclusion of available mediational means into the stream of activity by each participant. In essence, I traced how participants negotiated the tensions between task demands and the availability of mediational means, including their own mental resources (Wertsch, 1991a).

Wertsch (1991a) contends that “both qualitative and quantitative changes are defined in terms of mediation” and that mediation not only underscores the genetic method, but “it provides the key to formulating the link between interpsychological and intrapsychological functioning” (p. 91). Also, Wertsch (1991b) emphasises that “a complete genetic analysis would recognize tool-mediated action as a precursor to subsequent forms of mental functioning” (p. 21). Being mindful of mediation as a framework for microgenetic analysis, I reflected on what was it that I was curious to know about mediation. The answer was ‘how mediation mediated the coming-into-being of participants’ self-regulation in managing a new learning context using newly introduced concepts’. As I traced the various actions, together with verbalisation, and their psychological functions across the data, I focused on the rhetorical goals of the integrated reading-to-write task participants undertook. I was aware that discourse synthesis, as a scientific concept, consists of several other sub-concepts such as reading, writing, argumentation, and coherence. I then set out to examine actions specific to these sub-concepts.

While not fully determined a priori, at the conceptual level, the coding for strategic actions was also informed by previous reading and writing research. Following this, I identified key dimensions of participants’ regulatory behaviours that related to the
reading-to-write conceptual foci of (1) task representation, (2) intertextuality, and (3) logic, coherence and revision. Microgenetic episodes under these dimensions are operationalised as follows.

TABLE 3.1: Key dimensions of participants’ self-regulatory behaviours

<table>
<thead>
<tr>
<th>Conceptual Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intertextuality</td>
<td>Verbalisation relating to source texts evaluation, comparison of author’s position and participant’s position, and making connections or conceptual links between or across texts</td>
</tr>
<tr>
<td>Task representation</td>
<td>Verbalisation relating to task demands, planning, organisation of ideas prior to writing, and modifications made to initial planning</td>
</tr>
<tr>
<td>Logic, coherence, and revision</td>
<td>Verbalisation relating to argument development, claims, supporting evidence, coherence, and revision</td>
</tr>
</tbody>
</table>

Examining self-regulation under these dimensions is only through one researcher’s interpretations, and I acknowledge that there exists other dimensions under which self-regulation could be examined. Nonetheless, the analysis revealed that these dimensions were consistent across the data. The dimensions were found to be useful particularly for data reduction and schematisation. Recognising these dimensions enabled me to present microgenetic episodes from each set of verbalisation data coherently under certain themes.

3.11.2.5 Segmenting data into microgenetic episodes (excerpts)

The penultimate step in data preparation was segmenting data into microgenetic episodes for data presentation. De Guerrero and Villamil (2000) define microgenetic episodes as segments of transcribed verbalisation showing that the participants were “on task, that is, dealing with one discrete troublesource or a connected series of troublesources, or talking about the task, that is, discussing task procedures” (p. 56).

Informed by the SCT theoretical position on developmental change, I devised five criteria for episode selection. Each episode should satisfy at least one of the following criteria.

1. Verbalisation was context-sensitive and specific to scientific concepts mediated during the research intervention.
2. Cognitive behaviour was in a stage of unfolding as opposed to being automatised.

3. Negotiation of task demands could be clearly observed.

4. Deliberate inclusion of auxiliary means was apparent.

5. Progression from object- and other-regulation towards self-regulation was demonstrated.

3.11.2.6 Determining microgenetic development

The final step in data preparation I took was considering microgenetic development of self-regulation operationalised as a progression from object- or other-regulated to self-regulated behaviour as indicated in participants’ verbalisation. The process of identifying the progression was guided by Aljaafreh and Lantolf’s (1994) framework delineating five developmental stages in dealing with task-related problems ranging from problems that: (1) went unnoticed; (2) were noticed but left unsolved; (3) were noticed and solved mainly by other- or object-regulated actions; (4) were noticed and solved with minimal other- or object-regulated actions; to (5) were noticed and solved essentially by self-regulated actions.

Adopting the above developmental framework, I kept in mind that the microgenetic developmental changes might “be limited to only a few seconds, or even fractions of seconds” (Vygotsky, 1978, p. 61). For instance, microgenetic development was recorded when participants demonstrated conceptual gains or increased strategic control over task demands in one microgenetic episode in comparison to difficulties they experienced in earlier episodes. For example, in writing an introductory paragraph, participants might experience lexical difficulties when coming across unknown words while reading and were unable to work out the meaning instantly but were able to understand the words later on in another episode. In another instance, participants might notice that their writing was incoherent and began to revise, whereas, earlier the poor quality of the same text portion had gone unnoticed. In both examples, participants’ self-regulation could be said to undergo microgenetic developmental change.

In addition, in order to determine participants’ conceptual gains or developmental changes, I first needed to know what they had not been able to do before the intervention. I needed to find out what difficulties learners had had or what frustrations they had been
experiencing. By looking for evidence in the reading-to-write verbal data and juxtaposing this against reported pre-intervention experience, I was able to determine whether self-regulation had developed and to what degree. Pre-intervention difficulties and frustrations had been reported in the semi-structured interview. As the interview data contained information on predecessor behaviours which formed the historical foundation of the self-regulatory behaviours under investigation, the data enabled me to examine participants’ self-regulation historically. As I traced the difficulties, relevant data segments from the interview of each participant were highlighted, and all reported difficulties were noted in accordance with the rhetorical goal of the discourse synthesis task participants are assigned to do. The rhetorical goal, stated in the instruction, was to write a coherent argumentative essay or a paragraph based on three source texts. As the historicity of self-regulation could be elucidated by participant’s reported pre-intervention performance in comparison to their emergent performance during the final intervention-mediated writing task, microgenetic growth was discerned from participants’ engagement with the Toulmin’s argument model and the coherence mechanisms mediated during the intervention against the historical account of their pre-intervention behaviour.

Next, I describe data management with regard to data from the semi-structured interview, the content of which formed the baseline data supporting the microgenetic analysis.

3.11.3 Managing the interview data

As with the verbalisation data, interview data were carefully transcribed verbatim by myself, using an “ordinary writing system” (Manchón et al., 2005, p. 198), with pauses, non-verbal expressions, and paralinguistic features stated clearly in brackets. Following this, the transcriptions were entered into a Microsoft Word file and inspected line-by-line as suggested by Strauss and Corbin (1998). Similarly, Chamaz (2006) suggests, “line-by-line coding works particularly well with detailed data about fundamental empirical problems or processes” (p. 50). Following these suggestions, participants’ responses were read several times to understand the overall content and to allow relevant themes to emerge (Appendix P and Appendix Q). These themes, some of which were keywords in existing data, were highlighted, and in some cases words, phrases or sentences describing the themes were added. As the interview questions had already been grouped into separate sections, the responses were automatically grouped
accordingly. Guided by the questions in each section, the analysis procedure was initially deductive and focused on responses pertaining to participants’ learning background, current literacy experiences and learning needs. These issues were of research interest because the study did not adopt a pre-and post-test method and, therefore, no measure had been set against which the end-of-intervention performance could be compared.

Through repeated reading, I also kept in mind the overarching aim of examining developmental changes historically. Following this, I aimed to form baseline data with regard to participants’ learning histories. The responses were then coded into themes as guided by these notions. Emerging themes were reasons for participating, current reading and writing context, and reading and writing difficulties. All responses were then compared to ensure common themes for data presentation and analysis. Central to the phenomenon under investigation, the themes and relevant information were then highlighted, extracted, and organised to meaningfully describe the participants as social beings in their learning contexts. Using line numbers to note the corresponding location of each transcript segment, I compared emerging themes across all transcriptions to ensure consistency across cases.

3.12 Ensuring research quality

In order to be valid and research-worthy, qualitative data and its analysis must be structured by a well-defined analysis framework underpinned by sound theoretical considerations. Emphasising the importance of having “warrants of knowledge claims” or evidence of research findings, openness of information and replicability of methods, Lamberg & Middleton (2009) state, “…, if one of the goals of education is to create theoretically and empirically defensible innovations, then we must pay attention to the articulation of theory development and innovation engineering” (p. 243). This perspective underlines the need for researchers to be consciously aware of their theoretical and methodological decisions and to explicitly articulate the processes by which the decisions are made. Similarly, Creswell (2007) stresses the virtue of trustworthiness and authenticity with regard to how researchers may construct and interpret knowledge derived from research data. In the present study qualitative research quality is discussed in terms of credibility, transferability, dependability and confirmability (Lincoln & Guba, 1985).
3.12.1 Credibility

Credibility concerns research quality with regard to whether the research findings and conclusions formed by the researcher: (1) can be trusted as close approximations of the interpretations of the same events by the subjects under study; (2) drawn from data collected through appropriate research instruments; and (3) clearly described in relation to the real context in which the research takes place. These three aspects of credibility can be satisfactorily established through peer-debriefing, member-checking, prolonged engagement, triangulation, and a research journal (Lincoln & Guba, 1985).

3.12.1.1 Peer-debriefing

Peer-debriefing is defined as “a process of exposing oneself to a disinterested peer in a manner paralleling an analytical sessions and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer's mind” (Lincoln & Guba, 1985, p. 308). I believe this definition reflects the nature of peer-debriefing sessions in this study in which credibility of data interpretation was strengthened by the fact that the researcher engaged in several peer-debriefing sessions during the data collection process with several TESOL academics. These discussions helped ensure research rigour against potential shortcomings and possible biases.

First, a qualified Thai teacher of English with more than 30 years teaching experience in several Thai universities volunteered as a conversation partner to the researcher while in Thailand. During this discussion, the teacher asked several questions as to why certain interpretations or conclusions had been drawn by the researcher. This peer-debriefing session was akin to self-questioning strategy taught to the subjects in the sense that questions posted during this conversation helped the researcher focus on justifying and qualifying interpretations drawn from data. Although the questions were generated by the teacher and not the researcher, they helped the researcher to stay focused and adhere to research-bound and data-driven conclusions and not to draw information from the conversation partner.

Second, a doctoral student participating in peer-debriefing was a Bangkok-based assistant professor in TESOL as well as a PhD candidate in Applied Linguistics. On a weekly basis, an approximately one-hour telephone conversation allowed the researcher to discuss research-related issues with her peer while collecting data in Thailand. Upon
completion of the project, as the researcher passed through Bangkok, two more face-to-face discussions were secured. These last two meetings concluded the peer-debriefing sessions in Thailand.

Third, regular research-related conversations took place between the researcher and another PhD candidate who was completing a strategy-based study on reading, working with a large group of Thai EFL participants. Although this person later graduated from the Linguistics Department, the University of Otago, he remained available for peer-debriefing throughout data analysis processes of the present study.

Throughout this research project, peer-debriefing turned out to be one of the most powerful learning tools for the researcher, reflecting the value of collaborative learning and social interaction on psychological and academic development, as advocated in sociocultural theory.

3.12.1.2 Member-checking

Creswell (2005) defines member-checking as “a process in which the researcher asks one or more of the participants in the study to check the accuracy of the account” (p. 252). Member-checking permits comparison of possible discrepancies, modification of misunderstandings and confirmation of resonant views between the subjects and the researcher to take place. In the present study, one week after the project was completed, the researcher met with individual subjects for member-checking. This process allowed clarification of preliminary data analysis to take place. Initial findings were presented during these one-to-one post-intervention meetings and subjects were invited to comment and give feedback on the researcher’s interpretation of their respective data. Although at this stage not all data had been transcribed, the researcher was able to clarify preliminary analysis and several points of interest by viewing the video recordings with respective participants. All participants were met for member-checking within one week following the completion of the main study. As well, member-checking continued periodically throughout data analysis primarily via email correspondence and telecommunication. All findings presented in this study have been member-checked.

3.12.1.3 Prolonged engagement

Prolonged engagement refers to the researcher’s presence and active participation in the research context. My prolonged engagement can be described in terms of my
presence in the inception of the research intervention and methods, my teaching experience with ESL/EFL students, and my Thai L1 background.

First, in this study, my prolonged engagement was established as I personally designed and delivered the STI-based intervention (as opposed to observing other teachers in action). As I personally carried out the four-week intervention (Chapter Four), my research participation and observation were concomitant. My research engagement was further enhanced as I personally transcribed all verbal data obtained from the intervention.

Second, my prolonged engagement in the ESL/EFL writing contexts involved my 25 years TESOL teaching career in four counties, namely, Thailand, Hong Kong, Fiji, and New Zealand. During this time, I have worked with ESL students from various parts of the world and have taught at various levels from kindergarten to tertiary. My responsibility included teaching English for Further Studies and English for Academic Purposes as well as co-supervision of 14 undergraduate research projects in New Zealand.

And third, my prolonged engagement was accentuated by the fact that I was born and graduated with my first degree in Thailand before completing my postgraduate Dip TESL, a Master’s degree in Applied Linguistics, and professional interpreter training in Wellington, New Zealand. During data collection and analysis, my Thai L1, Thai cultural background, and professional interpreting expertise served as valuable resources in building professional rapport with the host institution and the participants and in shaping my understanding and interpretation of the data. The fact that I have insight into the field under investigation and the “opportunities for clarification and summarisation” can be viewed as a means to promote trustworthiness (Lincoln & Guba, 1985, p. 194). As I shared the first language and cultural background with the participants, my ability to gain insights into issues under investigation, capture the essence of events and relevant evidence within the research context, and seek clarification with participants thus enabled my analysis to reflect both “emic” (insider/participants/the observed) and “etic” (outsider/researcher/the observer) viewpoints (Mackey & Gass, 2005, p. 163).

3.12.1.4 Triangulation

Stake (2005) defines triangulation as “a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation” (p. 454).
Creswell (2005) refers to triangulation as “the process of corroborating evidence” which increases the degree of accuracy and helps validate qualitative research findings (p. 252). Triangulation helps increase research credibility by safeguarding against misanalysis and misrepresentation of data which could have been caused by a researcher’s bias, had the researcher relied on a single account of data collection. Using two or more research instruments in data collection yields richer, more diverse, and more substantial information, experience, and evidence of human behaviour. Each set of data can then be analysed from different perspectives and cross-referenced with data from another source. Bringing together data from different sources enables a more meaningful investigation to take place, giving a more holistic view of the phenomenon and thus increasing the level confidence in the researcher’s interpretations of research findings (Cohen, Manion & Morrison, 2000). In this study, research evidence was collected from five participants, using multiple research instruments, namely the OPT, questionnaire, semi-structured interview, self-reflective form, reading-to-write essay, and verbalisation during task as shown in Figure 3.1.

**FIGURE 3.1: Triangulation of data sources**

Also, triangulation of methods was achieved as several types of analysis were carried out on both written and verbal data as described in the previous section. Collecting data from several participants and using several methods of analysis allowed visual, audio, and verbal data to be captured and corroborated. This, in turn, enabled the researcher to gain better understandings and draw more refined conclusions than would otherwise be possible from data from a single instrument.
3.12.1.5 Research Journal

During the data collection period, a weekly research journal was kept in a form of email correspondence as I reported intervention activities, problems, solutions, progress and other significant research-related issues to my primary supervisor who also provided timely comments and suggestions. The research journal added to the richness and rigour in this study by detailing and discussing key incidences and significant classroom happenings as well as building and maintaining a chain of evidence systematically recorded throughout the intervention.

3.12.2 Transferability

Transferability concerns whether the findings and conclusions drawn from one study are applicable in another context (Miles & Huberman, 1994). One way a researcher may establish transferability is by providing a detailed description of research context and methodology. This information serves to aid other researchers who can decide whether the findings of one study would fit other investigations (Lincoln & Guba, 1985). In this study, transferability was established by carefully recording and narrating my research journey, keeping a detailed and honest account of all procedures including problems and solutions and providing a thick description of the research context and the phenomenon under investigation. Also, adopting original theoretical frameworks and/or known models and explicating how these models inform research decisions can strengthen transferability (Marshall & Rossman, 2011, p. 252). Activity theory and sociocultural theory were adopted as theoretical frameworks underpinning research decisions. An overview of these two known and well-established theories has been presented in this thesis.

3.12.3 Dependability

Dependability refers to the degree of replicability if someone else decides to conduct another investigation following the same research design (Bloor & Wood, 2006). In a qualitative study with data drawn from only a handful of participants, it is difficult to say whether the same outcomes would be reached if the research was replicated. Provided that the researcher is aware of possible weaknesses in a design and knows how to remedy the situation, while a single attempt or measure to achieve research rigour may not suffice, a combination of well-thought out and well-constructed measures taken together must, in one way or another, contribute to the uplifting of research standards.
(Dörnyei, 2007). Dependability in the present study was established through the pilot study, thick description, practicality of instruments and design, and reflexivity.

3.12.3.1 Pilot study and thick description

In this study, as well as ensuring a sound research design, the pilot study was carried out to trial the research instruments. Issues arising from the pilot study had been carefully recorded and discussed with my supervisor. Furthermore, the researcher made transparent the aim, objectives and procedures of the study to participants, and provided a thick description of the research site, participants, data collection, data analysis, interpretation and discussion in this thesis.

3.12.3.2 Practicality of research instruments and design

The feasibility and practicality of both the design and analysis could influence further growth within the same research area of interest through replication studies (Mellow, Reeder & Forster, 1996). For instance, the reading and writing tasks in this study represent the majority of academic writing tasks that many second language learners would normally be required to perform. In this respect, the research is likely to be replicable. Similar future investigations can be carried out with different groups of EFL learners. Furthermore, investigators may choose to work with students within particular disciplines, for instance, engineering, medical or business.

With regard to research instruments, the research adopted appropriate instruments such as the semi-structured interview, questionnaires, written discourse, and verbal protocols. As previously discussed, data management was systematic, coherent and justified.

3.12.3.3 Reflexivity

Merriam (2002) defines reflexivity as “critical self-reflection by the researcher regarding assumptions, worldview, biases, theoretical orientation, and relationship to the study that may affect the investigation” (p. 31). In safeguarding against researcher bias, I adopted reflexivity in both the coding and analysis of data, reflecting and revisiting transcripts along with multiple viewing of corresponding video recorded sections in order to capture the uniqueness and particularisation of each case.
Through reflexivity, I began to understand the meaning of ‘non-linear and recursive’ nature of qualitative inquiries. As I continued with my analysis and writing tasks, I consciously reminded myself to be more strategic, literally. I used self-questioning and self-instruction more frequently. And when I felt overwhelmed by the data, I talked myself into using ‘higher mental functions’. I stopped and recollected myself, reflecting on my thoughts more often. Allowing self-generated questions to inform my analysis, I gradually refined the data management process which in turn informed my understanding of the data.

One instance of reflexivity in this study involves emergent insights during the iterative process of data analysis which led to the addition of further questions to accommodate in-depth exploration of new discoveries. Following repeated reading of the interview transcriptions, main categories of learning difficulties began to emerge and the needs for additional contact for follow-up information and data clarification became paramount. Such needs were satisfied by contacting participants via email and telephone several times during the course of data analysis. Some of the recently asked questions via email in fact served to certify and clarify observation notes, class discussions, and conversations recorded earlier during the intervention. As “standard qualitative designs call for the person most responsible for interpretations to be in the field, making observations, exercising subjective judgment, analyzing and synthesizing, all the while realising their own consciousness” (Stake, 1995, p. 41), follow-up contact proved invaluable in maintaining true accounts of participants’ experiences and reducing research bias. As qualitative inquiries are highly subjective and the researcher is also the instrument for data collection, I maintained a critical awareness of possible research bias. As much as possible, the balance was sought for objectivity, abstraction and impartiality.

Another example of reflexivity concerns my daily and weekly review of the intervention progress. As stated earlier in this chapter, recruitment of participants was affected by the political unrest in Thailand. Further interruption during the data collection period was due to the preparation for the graduation ceremony on campus which saw participants’ normal classes rescheduled. Consequently, the intervention timetable was also affected. By the second week of the intervention, it had become clear that reducing the number of intervention sessions was imminent. During this time, through reflexivity, I was able to plan and manage the remaining intervention sessions. Focussing on the essential role of speech in L2 development and the orientation role of the learning
materials, I retained key sessions on verbalisation, reading-to-write, and the use of the SCOBA as well as the Toulmin’s model and discarded supplementary sessions on reading-to-write as there was no need for participants to fully master synthesis skills. Upon repeated reflection on the time constraints, I focused on mediating the key concepts in successive sessions rather than aiming for repeated rehearsals. Methodologically and conceptually, these decisions were endorsed by a Vygotskian view that microgenesis focuses on the participants’ unfolding development rather than their development at maturation.

Additionally, reflexivity also led to the research title being revised. In light of the research project completion and on-going analysis of data, the thesis title was changed from "The Effects of Textual Coherence Analysis and Metacognitive Strategy Training on Discourse Synthesis Tasks" to “Self-Regulation during a Reading-to-Write Task: A Sociocultural Theory-Based Investigation” to reflect not only the type of task performed by the participants but also the theoretical foundation and methodology of this study.

3.12.4 Confirmability

“Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry” (Denzin & Lincoln, 2005, p. 10). Unlike quantitative analysis commonly bound to a scientific framework of data interpretation and complex statistical manipulation, qualitative analysis draws upon the researcher’s perception of the world. In making sense of human behaviour and the context in which the behaviour is situated, a qualitative researcher draws on his/her past experience, understanding, biases, values and beliefs (Creswell, 2009).

How personal perspectives are introduced and judgment applied by the researcher can influence how data are interpreted and translated. The subjective nature of qualitative inquiry and analysis of data derived from its investigation is, thus, inevitably influenced by how the researcher interprets the data and findings. Qualitative researchers, thus, should “be prepared to argue that the logic and interpretative nature of qualitative inquiry can be made (somewhat) transparent to others thereby increasing the strength of the assertions” (Marshall & Rossman, 2011, p. 253).
In this study, confirmability was achieved via four processes: (1) citations of relevant scholarly material substantiating theoretical frameworks, discussion and conclusions; (2) clarification of participants’ self-reflection on task during the semi-structured interview; (3) clarification and confirmation of the findings and interpretations via member-checking; and (4) triangulation of methods and data sources presented earlier. Also, confirmability was further established by the clear articulation of theoretically informed research decisions with regard to data analysis procedures. Confirmability was strengthened by detailing my decision-making processes during data management. To avoid undue subjectivity and bias, clear justifications and explanations were given as to why one decision or step was preferred over other available potentials.

Collectively, the above processes reflected the integrity and fidelity of the implementation of research instruments and the formation of theoretical foundation and conceptual frameworks. These processes allowed the researcher to confirm the contextual and systematic nature of the investigation, and helped legitimise any claims made from the analysis of social interactions within the research context. Additionally, multiple forms of data including video-recorded, written and electronic data have been kept and will be available for further inspections if requested within five years of the completion of this thesis.

3.13 Ethical Issues

Ethical approval was granted by the Ethics Committee of the University of Otago and by the Thai education providers from where participants were recruited. As with any study involving human participants, ethical considerations of informed consent, confidentiality and anonymity were addressed. The objectives and procedure of the study were made clear to the host institutions and participants. Academic staff, allied personnel, all participants and other students were also treated with respect.

3.14 Summary

This chapter has described the qualitative method, case study design and microgenetic analysis as methodological positions of this study. It has articulated the research instruments and data collection methods. Also, the chapter has discussed the data management and analysis procedures, and addressed the research trustworthiness
and ethical issues. Next, Chapter Four presents the details of the research intervention, including the design, instructional procedures and activities.
CHAPTER FOUR
THE INTERVENTION

This chapter describes the research project. It begins with a short overview of the intervention purposes, description and requirements. After this, the details and results of the initial baseline data collection are presented. Next, there will be a section on the STI-informed instruction followed by a section on the instructional activities. Then, the instructional constraints and modifications made to the original lesson plans are discussed. This chapter concludes with an overview of the discourse synthesis tasks which culminated in the end-of-intervention reading-to-write task from which participants’ textual and verbal data were derived.

4.1 Course objectives

This course aimed to help participants gain conceptual understanding of discourse synthesis, self-regulation, textual coherence and argument rhetoric. It also aimed to familiarise participants with verbalisation strategy and increase their experience in writing coherent argument essays based on information provided. During this course, participants would learn to write-from-sources with correct citation, understand the connection between reading and writing, and use self-directed speech to gain control over argumentative writing.

4.2 Course description

This course was four weeks in duration and was taught in English. In deciding to participate in this course, participants would meet at least three times a week for approximately three hours per session. The timetable was negotiable due to prior participants’ commitments to their normal classes and the rescheduling of classes by the faculties to accommodate the graduation preparation.

4.3 Course requirements

1. All classroom materials were provided. Participants were asked to bring all hand-outs they had received to all sessions as these materials would be revisited regularly.
2. Punctuality was expected. Advanced notice for inability to attend or late arrival was requested. Full attendance was encouraged. Participants who missed a session(s) were urged to continue their participation, although they would cease to be the subject of this study due to incomplete data.

3. Participants’ right to withdraw from this course applied at all times.

4.4 Overview and results of the Oxford Placement Test (OPT) and Metacognitive Reading Strategies Questionnaire (MRSQ) (Appendix B)

The OPT and the MRSQ were administered in the first session.

4.4.1 The OPT results

The OPT is a multi-choice test which comprises two sections of listening and grammar. Each contains 100 items. The results are shown below.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Course enrolled</th>
<th>Grammar Score</th>
<th>Listening Score</th>
<th>Total Score</th>
<th>Identified user of English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aoddy</td>
<td>PhD in Marketing</td>
<td>54/100</td>
<td>49/100</td>
<td>103/200</td>
<td>Basic/extremely limited user</td>
</tr>
<tr>
<td>Aum</td>
<td>PhD in Online Marketing</td>
<td>61/100</td>
<td>67/100</td>
<td>128/200</td>
<td>Modest user</td>
</tr>
<tr>
<td>Chubby</td>
<td>BSC in Computer Engineering</td>
<td>76/100</td>
<td>64/100</td>
<td>140/200</td>
<td>Competent user</td>
</tr>
<tr>
<td>Mathew</td>
<td>BA in Language for Development (English Major)</td>
<td>61/100</td>
<td>68/100</td>
<td>129/200</td>
<td>Modest user</td>
</tr>
<tr>
<td>Rose</td>
<td>BA in Language for Development (English Major)</td>
<td>57/100</td>
<td>61/100</td>
<td>118/200</td>
<td>Limited user</td>
</tr>
</tbody>
</table>

The test scores were made known only to each respective participant. Participants were then asked to reflect on their test results, introduce themselves to the class, and comment on their test performance if they so wished. Aoddy commented that it was not surprising that he did very poorly with the test and revealed that he had not been attending
any English classes for a number of years. He had completed his bachelor and master degrees in Thailand and had no experience of overseas travel. Aum, on the other hand, shared that she finished her master’s degree from a US university in 1998. Aum indicated that since graduating from America, she had not had many opportunities to use English at all. Aum believed lack of practice led to her poor test result, which was considered representative of her English proficiency. Chubby reported spending a year in New Zealand and had been improving her English by reading English novels and short stories. She thought her reading had contributed to her test score. Neither Mathew nor Rose commented on their test score but stated that there was no way of knowing what the OPT would be like and, therefore, they were not able to prepare for the test. All participants knew that the test scores were not for assessment purposes and projected their attention to what they could learn and how the intervention could benefit them.

4.4.2 The MRSQ results

The Metacognitive Reading Strategies Questionnaire (MRSQ), developed by Taraban et al. (2004), contains 22 items of analytic and pragmatic strategy use. Analytic strategies (items 1-16), e.g. inferring or activating prior knowledge, are those used to aid comprehension, whereas pragmatic strategies (items 17-22), such as highlighting or underlining key words, are employed to enhance memory or identification of key information. In completing the questionnaire, participants were encouraged to ask for clarification. Dictionary use was also permitted. For the purpose of this study, frequencies of strategy use (never, rarely, sometimes, often, and always) were assigned numerical scores (0, 1, 2, 3, and 4) post-administration so as not to influence participants’ opinions. The mean of frequencies reported for each item by all participants was then calculated.

As shown in Table 4.2 on the following page, the three most frequently used items (underlined) reported fell within the category of pragmatic strategies, whereas the three least frequently used items (in bold) were analytic strategies. This meant that participants were not familiar with some of the analytical strategies and tended to highlight, underline, and re-read, rather than being aware of text readability, monitoring their comprehension or predicting content. According to Taraban et al. (2004) pragmatic strategies do not significantly aid cognition and are often reported by unskilled readers.
TABLE 4.2: MRSQ results

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. As I am reading, I evaluate the text to determine whether it contributes to my knowledge/understanding of the subject.</td>
<td>1.6</td>
</tr>
<tr>
<td>2. After I have read a text, I anticipate how I will use the knowledge that I have gained from reading the text.</td>
<td>2.4</td>
</tr>
<tr>
<td>3. I try to draw on my knowledge of the topic to help me understand what I am reading.</td>
<td>2.6</td>
</tr>
<tr>
<td>4. While I am reading, I reconsider and revise my background knowledge about the topic, based on the text’s content.</td>
<td>2.0</td>
</tr>
<tr>
<td>5. While I am reading, I reconsider and revise my prior questions about the topic based on the text’s content.</td>
<td>2.2</td>
</tr>
<tr>
<td>6. After I read a text, I consider other possible interpretations to determine whether I understood the text.</td>
<td>1.4</td>
</tr>
<tr>
<td>7. As I am reading, I distinguish between information that I already know and new information.</td>
<td>2.4</td>
</tr>
<tr>
<td>8. When information critical to my understanding of the text is not directly stated, I try to infer that information from the text.</td>
<td>2.8</td>
</tr>
<tr>
<td>9. I evaluate whether what I am reading is relevant to my reading goals.</td>
<td>1.8</td>
</tr>
<tr>
<td>10. I search out information relevant to my reading goals.</td>
<td>1.8</td>
</tr>
<tr>
<td>11. I anticipate information that will be presented in the text.</td>
<td>1.4</td>
</tr>
<tr>
<td>12. While I am reading, I try to determine the meaning of unknown words that seem critical to the meaning of the text.</td>
<td>2.8</td>
</tr>
<tr>
<td>13. As I read along, I check whether I had anticipated the current information.</td>
<td>2.0</td>
</tr>
<tr>
<td>14. While reading, I exploit my personal strengths in order to better understand the text. If I am a good reader, I focus on the text; if I am good with figures and diagrams, I focus on that information.</td>
<td>2.2</td>
</tr>
<tr>
<td>15. While reading, I visualise descriptions in order to better understand the text.</td>
<td>2.4</td>
</tr>
<tr>
<td>16. I note how hard or easy a text is to read.</td>
<td>1.0</td>
</tr>
<tr>
<td>17. I make notes when reading in order to remember the information.</td>
<td>3.0</td>
</tr>
<tr>
<td>18. While reading, I underline and highlight important information in order to find it more easily later on.</td>
<td>3.8</td>
</tr>
<tr>
<td>19. While reading, I write questions and notes in the margin in order to better understand the text.</td>
<td>1.4</td>
</tr>
<tr>
<td>20. I try to underline when reading in order to remember the information.</td>
<td>3.6</td>
</tr>
<tr>
<td>21. I read material more than once in order to remember the information.</td>
<td>2.6</td>
</tr>
<tr>
<td>22. When I am having difficulty comprehending a text, I re-read the text.</td>
<td>3.2</td>
</tr>
</tbody>
</table>

In addition, in a follow-up discussion, participants stated that although they had reported many of the analytical strategies (with the means shown to be in a medium range of 2-3), most of these strategies were often used unsuccessfully. In particular, participants
verbally reported that inferring was the least understood and most difficult to apply. Goal-setting (items 9-10) was also found to be unfamiliar and inconsequential due to lack of past application. Commonly agreed by all participants (14 in total, prior to attrition) was that learning strategies were thought of as magic tricks or time-saving shortcuts used without much effort to achieve good learning results. Other interesting points made were that participants had never discussed strategy use prior to the intervention and that they would not have been able to identify any strategies they might have used (even in Thai), had the list of items not been provided. The only two strategies they were familiar with were skimming and scanning. Both were considered test-wise techniques to be used under a time constraint. The revelation about participants’ misconception of strategy and their apparent inability to discuss their strategy use came as no surprise. Similar statements were reported by participants in the pilot study. The questionnaire and discussion results alerted the researcher to participants’ lack of theoretical understanding of strategy use and types of strategies that might be beneficial to their reading-to-write activity.

4.5 STI-informed instruction

Instruction during the research project was based on STI principles advocated by Gal’perin (1969). Instructional procedures encompassed: (1) creating and sustaining motivation to learn; (2) presenting each concept as comprehensively as possible using a variety of instructional materials; (3) encouraging discussion at pair, group and class level before moving into the independent performance phase; (4) emphasising the use of speech and verbalisation through self-questioning and self-instruction; and (5) promoting reflective learning and opportunities to make sense of conceptual concepts as related constructs. These procedures are outlined below.

4.5.1 Creating and sustaining motivation to learn

In the first session, I explained the value of collaborative interaction, made salient the role of participants, and urged them to appreciate their interdependence in knowledge constructing processes. Participants were made aware that their willingness to participate and their actual engagement would assist their learning. To be instrumental to their own cognitive growth, participants were encouraged to actively engage in oral discourse with their partners. Their collaborative interaction meant they and their partners were poised to gain from their mutual collective scaffolding (Donato, 1994).
To drum up motivation and to gain a sense of what participants already knew, I invited the class to share their thoughts about academic writing in higher education. Reading and writing strategies and difficulties were also discussed. My role was not giving out directives but to invite expression of diverging viewpoints and ensure balanced contribution from all class members.

This initial session provided a relatively clear picture of participants’ learning histories together with their motives, strengths and weaknesses in academic reading and writing, and strategy use. (Note that similar issues were also reported during the semi-structured interview.) The session brought to the fore participants’ needs and wants and augmented my understanding of their learning context. The session also yielded some useful information enabling informed decisions. For instance, the class considered ‘inferring’ the most useful yet least understood and least practiced strategy. Following this, one of the very first exercises was on inferring.

4.5.2 Presenting each concept as comprehensively as possible using a variety of instructional materials

SCT posits that successful mediated learning is likely to occur if students are made aware of the learning purposes, provided with well-designed instructional materials, and explicitly taught to treat a learning concept as a conceptual tool and not an end in itself. Principally, Vygotsky (1978) contends that social interaction is the very source of learning, that instruction should lead development and that the inclusion of speech as a mediational means is essential in the learning process. As well, Gal’perin (1989) emphasises the inclusion of both verbalisation and materiality to facilitate task orientation and the process of concept formation. Any omission of any of these key SCT notions could potentially jeopardise any possible development within the students’ ZPDs.

Concept-based instruction was aimed to minimise time-wasting, remove possible pitfalls and vagueness that may disorient learners, and allow more time for conceptual development. For this purpose, I focussed on the role of the coherence and argumentation SCOBAs and their orienting functionality. As well as the SCOBAs, I made extensive use of pictures, synthetic figurines, and hand-drawn diagrams. These instructional materials served to bring abstract concepts within participants’ ZPDs, aid understanding, and promote hands-on rehearsal.
In presenting the concepts, I highlighted the pedagogical, conceptual, and linguistic elements. This meant each class involved making explicit the teaching purposes, an overview of a learning concept, and language-related issues. Each of the concepts taught was accompanied by textual resources which participants were encouraged to revisit and bring to subsequent sessions to allow revision and expansion. The coherence and Toulmin’s model SCOBAs, for instance, were vital materialised components of the learning concepts. Throughout the intervention, participants read, critiqued and responded to the SCOBAs and to several model texts, while working in groups, in pairs and individually. The provision of the SCOBAs constituted Gal’perin’s (1989) concept of materiality providing the orientation basis for participants’ overt verbalised and materialised goal-directed actions.

4.5.3 Encouraging discussion at pair, group, and class levels before moving into the independent performance phase

Stetsenko and Arievitch (1997) contend that “psychological processes emerge first in collective behavior, in co-operation with other people, and only subsequently become internalized as the individual’s own ‘possession’” (p. 161). Individual cognition is, therefore, socially and culturally constituted. In keeping with this SCT framework, one of the pedagogical goals was to emphasise the collaborative approach to knowledge co-construction and ownership to maximise participants’ learning potential. Following this, class and peer discussions became a means for participants to describe the learning concepts, negotiate possible applications and build their conceptual understanding through collective scaffolding in which verbalisation was encouraged. And although the carefully-designed STI-informed instructional materials played a crucial role through the course of the intervention, participants’ learning was also largely shaped by shared negotiation and co-construction of meaning with their peers. Following each peer discussion, the class regrouped and reported back to the researcher and other groups. Social interactions mediated by dialogs, thus, became both teaching and learning strategy. Participants often randomly paired up or worked in a group of three. Fortunately, the class recognised the value of shared cognition as explained by the researcher. Consequently, participants sought to exchange knowledge with different group members through various activities and each group, where possible, consisted of both undergraduate and PhD students. During the activities, the groups were visited regularly by the researcher to answer questions, observe their interaction, and ensure that they were on task.
4.5.4 Emphasising the use of speech and verbalisation through self-questioning and self-instruction

Verbalisation training took place during the first week of the intervention. The purposes of the training and of verbalisation as self-regulatory strategy were made explicit to participants. Verbalisation was aimed to mediate the concept of self-regulation through speech. As self-regulation was presented as both the means for and the result of higher mental thinking, it was therefore both the process and product of semiotic mediation. Semiotic mediation, in this context, means using symbol systems and meanings, in this case language, to talk about language use, and using language to discuss the concept through the concept and not only about the concept. That is, speaking, and more specifically verbalising, was a key learning tool rather than a token exercise. More specifically, self-directed speech or verbalisation was presented as a key strategy. (See 4.7.1 for verbalisation training.)

4.5.5 Promoting reflective learning and opportunities to make sense of conceptual concepts as related constructs.

Throughout the intervention, instruction often linked multiple concepts and extended over multiple sessions. Previously presented concepts were continually revisited to reflect their interdiscursive nature. Revising previously learned concepts and linking them to the current activities also served as a maintenance mechanism which helped to strengthen participant’s knowledge and confidence.

For instance, presenting discourse synthesis, argumentation and coherence as related concepts was my instructional priority. It was pointed out to participants that argumentation was the main genre of all reading-to-write assignments in higher education and one could not write coherently without understanding how argument could be developed and supported by both one’s own ideas, prior knowledge, and information from sources. The idea that all key concepts were interlaced was also emphasised when coherence was contextualised in the Toulmin’s argument model and the logical semantic progression according to the argument rhetoric.

Another instance of reflective learning was done through reflective forms filled in each week immediately after a discourse synthesis task. Three main discourse synthesis tasks were completed in total (see 4.8 for detail). The self-reflection form (Appendix M)
asked participants to provide information about their performance including perceived difficulties they experienced and usefulness of strategies applied during the task. The form took approximately 10-20 minutes to complete. It was emphasised that there were no right or wrong answers to the questions and participants were encouraged to write as much as possible in Thai or English or both.

4.6 The lesson plans

Please see Appendix E for the lesson plans.

4.7 Details of instructional activities

Essentially, the learning processes for each concept occurred through modelling, group work, and individual work. Details are as follows.

4.7.1 Self-regulation and verbalisation training

The first concept taught was self-regulation. Working on a reading text about being a successful tertiary student (Samson & Radloff, 2001), participants were guided toward conceptualising what self-regulation meant. Following this, the terms ‘strategy,’ ‘goal-setting’ and ‘verbalisation’ were introduced. Self-directed speech or verbalisation as a means to energise and regulate one’s thinking was then demonstrated. The intent of the instruction was to engage participants in taking some form of control over their mental functions during task. The types of mental manipulation which could be induced by verbalisation include directing attention, recognising problem spaces, problem-solving, goal setting, planning, executing and evaluating. The various degrees of goal-directed actions demonstrated by participants were taken to reflect the degree of their regulation as described by Aljaafreh and Lantolf (1994) (Section 3.11.2.6, p. 107).

I began verbalisation training by modelling self-directed speech. To introduce orientation, execution and action (Gal’perin, 1969), I articulated, justified and evaluated each self-directed question and self-instruction as it occurred. Each decision was goal-directed and made through logical reasoning after a problem had been identified and comparison with other possible decisions and outcomes had been made. I used phrases such as “The problem with this is…”, “I think this is good because…”, “This is a good idea because…”, “After I do this I will get…”, “This will make…”, “Should I do this?”, “Why should I do this?”, “What do I want from this?”, “Maybe I will wait”, and “I’ll
think about this later”. The scenario being modelled was my decision-making process about a journey to visit a friend. I decided to take a different route to her house because I had particular goals which could not have been attained had I chosen the usual route. The topic was chosen so as to begin verbalisation training with a familiar and non-threatening context for participants. Accompanying the overt articulation was a drawing on the board showing my logical thinking pattern. The drawing served as a visual aid to the class.

The second topic modelled was a female teacher choosing a prospective partner. Although the topic was non-academic, it mirrored a scene from a popular Thai TV series and served to capture participants’ attention as they could relate well to this. A second set of synthetic figurines of people in uniform depicting their different professions (a sailor, a soldier, a policeman, a firefighter, a doctor, a farmer, and a fisherman) was used. Again, I focused on self-questioning and self-instruction as well as goal-setting while deciding on the preferred profession of my future spouse. After this, I linked verbalisation to reading and gave out some sample statements for this.

Before the class did verbalisation for reading, to make verbalisation manageable I encouraged participants to try out verbalisation for some non-academic purposes. To scaffold the training as well as creating a comfortable context for rehearsal, a set of synthetic figurines of various animals was provided. Individually, participants were asked to group the animals according to their category of choice, for instance, their place of habitat (land, sea, etc.), their physical features (four-legged, winged, etc.), and the type of food the animals eat (grain, vegetables, etc.). Participants were asked to justify their decisions, and, for each action they took, they were encouraged to self-question and self-instruct. Chubby took part in rehearsing in front of the group but did not articulate her goals. When asked, she stated that she aimed to separate animals with legs from the legless ones. Aoddy also volunteered for this activity and struggled with producing questions. At the end of this exercise, Aoddy voiced his concern over his inability to form interrogative statements. I took a mental note of his difficulty and suggested to the class that a list could be made to assist verbalisation but it was not advisable to try to memorise questions provided because different people might hold different goals regardless of whether they performed the same task or not. After this, participants were invited to practice using self-instruction and self-questioning on the topic of their choice, and Aum volunteered to demonstrate how she had chosen to pursue her PhD at a Malaysian university. Aum set explicit goals to be able to take care of her parents, to be able to return
home often, and to improve her English. To obtain a doctoral degree, she had in mind America, Thailand, Australia, Malaysia, or England. Aum spoke fluently but her verbalisation turned into a narration without much self-directed speech and so I asked her to focus self-questioning and self-instruction in relation to her goals. This showed that even a fluent speaker might still need practice in order to verbalise effectively.

After I was satisfied that the class had grasped the concepts of self-regulation, verbalisation, self-questioning and self-instruction, I began to model verbalisation during reading. The text used for this purpose was an informational text on overseas scholarship produced by Otago University. The text had been chosen for its salient features such as colourful and interesting layout, ease of understanding of the content, and authenticity. More importantly, it was aimed at academic audience in the real world. Following the modelling, participants worked in pairs to practise verbalisation on copies of the same text. The class then discussed suitable questions and instructional statements for reading and writing. During this time, participants were encouraged to use verbalisation to justify their choice of questions and instructions.

During the interval, I typed up the lists of self-questioning and self-instruction statements (Appendix H & Appendix I). And although the lists could have been organised beforehand, I wanted participants to have a sense of ownership over the material. A number of statements suggested by participants were included. Multiple copies were made electronically and given to participants after the interval. Working in pairs, participants then practised verbalisation during reading, using the lists provided. While the provision of the lists served to scaffold verbalisation, it did not restrict self-generated questions or instructions by participants. The whole training session described here took just over three hours with two twenty-minute breaks.

4.7.2 Argumentation

Argumentation instruction began with the emphasis on the role of divergent viewpoints and the significance of supporting evidence. To scaffold the concept of argumentation, I began with a topic easy to understand and relatively known to the group. Being mindful of the important role of speech in STI instruction and of the oral tradition as the main communicative channel among the Thais, I asked the class to work in pairs to discuss some health and everyday living issues. Another topic orally discussed was ‘Whether fast food outlets such as McDonald’s and KFC (vastly popular among Thai
university students) were suitable venues for birthday celebrations’. The topic proved highly debatable as some participants voted in favour of convenience and fashionable trends to follow, whereas others deemed western fast food scenes extravagant, wasteful and unhealthy. Following the above exercise, the class was introduced to the Toulmin’s argument system (Toulmin, 1958). Each participant received a summary of the system, a form of a SCOBA for argumentation. The Toulmin’s Model (TM) (Appendix H) was then discussed in detail. Specific attention was paid to definition of terms stated in the first half of the model. First, everybody joined in the class discussion on the importance of claim, data, warrant, backing and qualifier, before moving into pair discussion 15 minutes later. Overall, two argument SCOBAs were introduced to promote critical thinking and argumentative concept formation. The two debatable topics were whether the university should provide more drinking fountains and whether all electrical cables in the city should be buried underground. Both topics were argued during pair work and re-examined by the class as a group facilitated by myself.

The class then returned to the fast food outlets topic (discussed earlier in the session) and viewed this through the Toulmin’s lens. Differing views of various participants, which formed the basis of their oral argument, were slowly being turned into a written discourse as I wrote this up on the board under respective columns depicting the Toulmin’s argument model. This was done first by asking participants under which column they thought the sentence ought to be and why. As this exercise was aimed at inducing complex thinking and active oral discourse, rather than leaving opportunities and the level of participation to chance, I posed several open-ended questions and invited those who were inactive to take part in the conversation. During the session, participants were urged to ask questions and listen attentively to questions and comments made by others. They were also encouraged to go beyond simply agreeing or disagreeing and to critically evaluate and appraise divergent perspectives. Varying viewpoints were liberated through further debates. The exercise helped participants gain their conceptual understanding and formulate their own argumentative stance.

In using the Toulmin’s model, participants were encouraged to consider counterarguments or rebuttals in view of their potential audience’s opposing viewpoints. They were also cautioned that not all argumentative writing applied the Toulmin’s model as semantic and textual organisation of the written discourse were sensitive to rhetorical purposes of the writers and their audience. Also, as participants considered textual
coherence while reading and writing they were asked to keep the audience in mind as the text could appear coherent to the writer but incoherent to the reader.

4.7.3 Coherence

Coherence was presented from a reader’s perspective as a quality of logical progression of ideas and logical reasoning and the connectedness between sentences and ideas that make the text easy to understand. Key concepts taught under coherence were grammatical and logical cohesion (Halliday & Hasan, 1976), topical progression (Lautamatti, 1987), and logical organisation and progression of ideas based on the Toulmin’s argumentative components. Several sub-concepts, such as audience awareness, topic sentence, old-to-new transition, and grammatical parallel construction, were also taught.

The first textual coherence exercise was performed together as a class. I wrote a short passage on the board and the class considered whether this was coherent. After several examples, participants were asked to write at least three sentences of their own before reading these aloud so that I could write these on the board. The writing was reviewed by the group to decide whether it was coherent. Following this, participants were asked individually to write a sentence on the board to which other participants would add their next sentence in an attempt to make the text coherent. The class assessed the text on the board and discussed what made text coherent or otherwise. Topical progression (Appendix N) was then introduced and the class continued to work with sentences written up on the board, many of which were produced by participants themselves. Following this, participants were introduced to the coherence SCOBA and the accompanying notes (Appendix F). The SCOBA was explained in full and its application demonstrated through verbalisation by the researcher. After this, participants worked in pairs to discuss the SCOBA and to use it to evaluate the text on ‘how to be a successful tertiary student’ given in the previous session.

The next exercise combined coherence and argument concepts and was based on a short passage on house safety written by myself (Appendix G). Participants read the text individually and were encouraged to identify the claims, question the evidence, and decide whether the text was coherent. This individual work was then followed by pair work which focused more on coherence. Participants were encouraged to use self-questioning and self-instruction. Participants then regrouped for a class discussion.
Interestingly, all participants thought the text was perfectly written and very coherent. They could not spot any part that would violate their expectations or understanding. They all thought the text easy to follow with manageable vocabulary and sentence structures. Participants became very surprised when I pointed out some coherence and topical progression violations. Following this, participants returned to work in pairs to discuss and summarise what had transpired.

The final coherence exercise involved examining an essay on ‘Whether the Internet is a vital communication tool for the 21st century’, written by a postgraduate English-major student from another Thai university. Participants were encouraged to examine both coherence and Toulmin’s argument elements while reading and discussing this essay. I also made a point of asking open-ended questions that generate conversation and promoted thinking rather than limiting students’ answers to ‘yes’ and ‘no’ responses. Often, I also took up a student’s comment and turned this into a topic of discussion. As a result, classroom conversation was animated and interactive. And while concept formation was based on carefully designed materials, participants’ conceptual understanding was also built through their actual discussion and meaning-construction.

4.7.4 Discourse synthesis

Discourse synthesis was introduced as a hybrid between reading and writing which required a careful combination of information from different sources and one’s own ideas (Spivey, 1984). Being aware of the significance of oral discourse in Thai communication, I gave an example of discussing current affairs whereby several people had had their opinions heard, for instance, how to choose the best camping ground after having asked all prospective camping companions. The class could easily see that the decision must be made by the speaker but inevitably taking into account perspectives of other would-be campers. The next example involved the class discussing and retelling the same news broadcasted on several TV channels and published in various newspapers. To emphasise the nature of multiple sources, participants worked with a specific requirement that the speaker made explicit his/her own view and stated the original sources. After the class was warmed up to the concept of combining information from several sources, the focus moved towards the credibility of the source information and the importance of acknowledging the sources. Sub-concepts introduced under discourse synthesis included paragraph formation, coherence, plagiarism, and citation. Instruction on citation was
based on phrases and sentences suggested by Hinkel (2004, pp. 187-189). Details of the three discourse synthesis tasks completed during the intervention are as follows.

4.8  **Overview of the discourse synthesis tasks**

In this project, three main discourse synthesis tasks were sequentially organised to scaffold and increasingly emphasise the concept of making use of information from source texts in order to produce a new piece of writing. The verbalisation data for the analysis were collected from the third writing task.

4.8.1  **Task one: Promoting an apartment unit**

As participants began to grasp the idea that discourse synthesis inevitably involved consumption of reading texts, they were concerned over their low reading proficiency and inability to infer. They reported that they mostly read to extract meaning as the words appeared on paper and had not been shown how to read between the lines or to construct meaning other than literal meaning as stated by their teacher or a dictionary. The first exercise on discourse synthesis was thus designed to promote both the concept of combining multiple pieces of information and inferring strategy.

In this task, participants worked with sentence-level information in order to write. Seven sentences detailing information of occupants of an apartment block were provided in the source text. Participants worked in pairs and were encouraged to collaboratively complete their work through peer discussion using verbalisation strategy. They were asked to draw a diagram depicting an apartment building with occupants listed on their respective floors. This was then followed by a requirement for students to produce a few sentences to promote the soon-to-be vacant floor of the apartment. A class discussion prior to task commencement helped determine the role of participants as readers/writers assuming an imaginary role of real-estate agents promoting an apartment unit to the public. In this introductory task, although the concept of discourse synthesis remained in place, the transformation of the information from the source texts to participants’ texts was minimal and very little writing was required. The task also served to scaffold the concept of ‘inferring as a reading strategy’, which was reported to be unfamiliar to participants.
4.8.2  Task two: Nominating a teacher for promotion/asking for funding

The second task entailed paragraph-level writing on issues concerning the environment and commenting on a teacher’s professionalism. Participants were asked to choose one of these topics and complete their writing on a work sheet. Learning was scaffolded by the worksheet with exercises on topic sentences and paragraph formation. The provision of the worksheet was reported to be particularly helpful and all participants commented on the ease of writing on such familiar and general topics. The first topic appealed to all participants as it was common to everybody’s awareness, as did the second topic with slightly different rationality. The undergraduates all had some ideas of what attributes they wanted to see in a teacher (in this case named Mary), while the PhD candidates were all teachers themselves, and, thus, were in a position to comfortably write about their profession. Incidentally, the class resolved to settle into their writing mode with the undergraduates working on environment and the PhD students opting to comment on teaching. Each participant completed three paragraphs on the chosen topic. Each group collectively ended up with nine short paragraphs, and was asked to briefly present their writing to the class. Following a lunch break, only the PhD group returned to class to complete a reading-to-write task based on their collective information. They were encouraged to use verbalisation and peer discussion, and draw on the information they had each prepared. Their task was to write a proposal nominating a teacher in their department for promotion. During this time, the undergraduate students were asked not to return until two hours later so that the researcher could closely observe and assist the PhD students while they worked collaboratively on their writing and grappled with the concepts of discourse synthesis and verbalisation. Following this, the undergraduates completed their task in the same manner as did the PhD students. Their topic was asking for funding from the university’s Student Union to help with an environmental initiative on campus.

4.8.3  Task three: Child discipline

One of the principal reasons for opting for this topic was the researcher’s desire to give participants something they could all write about. As the researcher had no previous contact with this group of participants prior to the research project, it was important to assign a topic suitable to everybody’s background so that all participants had something to say. The topic of child discipline was appropriate for the several reasons.
First, each and every participant, despite their current age, was once a child. They had their own experience to reflect on as background knowledge. Second, despite the fact that some participants were single and some married with and without children, all participants were familiar with the concept of child discipline. This is because disciplining any given child in the Thai society does not specifically fall upon any one person in the family. The structure of a Thai family is as such that there are many immediate and extended family members who may take the role to discipline children born to other family members. For participants who did not have children of their own, they would definitely have been disciplined by more senior members of their respective families, for instance, their aunts, uncles, grandfathers or grandmothers. Also, they themselves were likely to have disciplined their younger siblings or cousins, as well as nieces and nephews at one time or another. Furthermore, it is generally known that child smacking is still prevalent and is one of the most commonly used methods to discipline a child in the Thai society. This is not to say that Thai parents smack children without reason or that most Thai parents prefer smacking over other disciplinary methods. Nonetheless, smacking is widely practiced and, to date, there has not been any known legal or political movement towards banning child-smacking in home environment in Thailand. Although smacking is banned at school, teachers who can no longer legally smack their students in class can still be seen smacking their own children at home.

With smacking being a common practice in many Thai households and deeply ingrained in the Thai way of life, I sought to present a more balanced view on the issue of child discipline by selecting the three source texts projecting the view not prevalent in the Thai society. For this reason, all three passages provided as reading sources for participants were based on child discipline, more specifically anti-smacking, as generally demonstrated through a common viewpoint held in many western countries. Furthermore, the view presented in the instruction sheet clearly stated the English and Thai proverbs, both of which promoting child smacking as a form of acceptable disciplinary method. Information in the instruction sheet thus served to counterbalance the information in the source texts (Appendix L). I made explicit the opportunity for participants to freely change their mind once they had read the texts provided. In addition, a close look at the source texts would clearly show that only Text A might be viewed as opposing the smacking of a child. Text B, for instance, did not explicitly state that parents should not smack their children. Rather, the text indicated different ways of correcting children’s
behaviour, which might be regarded as positive discipline. Text C, for example, did not openly advocate that smacking children should be made illegal, but instead it focused on the issue of human rights and clearly stated that children had rights just like adults.

The task prompt (instruction sheet) was designed to serve as an orientation basis toward task representation. Participants were told that the task prompt could also be referred to in their writing, and were asked to read the prompt carefully. No further guidance was given. For participants who opted for an anti-smacking stance, they could use the source texts to support their arguments and use the Thai and English proverbs as their possible rebuttals. Should they wish to argue for smacking, the proverbs could strengthen their proposition while the source information could be used to form counterarguments. Participants were left to work out their argument stance and decide on how to use the materials themselves.

To complete this task, participants were given ten minutes to read the task prompt and an additional 45 minutes to read the three short texts and write a paragraph of at least seven sentences. Alternatively, participants could choose to write an essay of 250-300 words for which the time allocated was 1 hour and 30 minutes.

In keeping with Gal’perin’s STI, the instruction sheet was designed to provide participants with the orienting blueprint of the task, that is, the structure and the overview of the task according to the pedagogical and rhetorical goals. The instructions in the task prompt enumerated various key aspects of discourse synthesis task specifications and aimed to facilitate participants’ future actions.

4.9 Instructional constraints and modifications

The intervention suffered unsettling timetables due to various other commitments of both the undergraduate and PhD participants. Modifications made to the initial lesson plans included introducing essential concepts earlier than planned (for instance, the initial lesson plans showed verbalisation in the second week but it was taught in the first week), dropping useful but non-essential exercises, and shortening rehearsal times for strategy application. A number of classes initially planned for week-days were replaced by weekend classes to accommodate the rescheduling of the undergraduate participants’ normal classes due to the up-coming graduation of their seniors.
4.10 Summary

In this chapter, I have situated the research intervention in Galperin’s STI pedagogy. I have presented the design, instructional procedures and activities of the research intervention, together with the overall results of the Oxford Placement Test and the Metacognitive Reading Strategies Questionnaire. I have also provided an overview of instructional procedures, detailed key classroom-based activities, described the three reading-to-write tasks, and outlined modifications made to the initial lesson plans. Next, in Chapter Five, I present findings from textual and verbal data following the completion of the said intervention.
CHAPTER FIVE
FINDINGS

The aim of this research is to examine the nature of self-regulatory behaviour of five participants during a reading-to-write task. The task was administered at the end of a four-week intervention in which key scientific concepts of discourse synthesis, textual coherence, and argumentation were mediated.

For the purpose of this study, mediation is operationalised as purposeful instruction aimed at helping participants develop competence in argument composition based on multiple sources. Moreover, mediation is designed to invoke participants’ self-regulation, operationalised as participants’ active engagement and increased control over task demands through verbalisation in orienting, executing and monitoring purposeful actions while composing an argumentative essay. This study adopts a definition of an argument as “the sequence of interlinked claims and reasons that, between them, establish the content and force of the position for which a particular speaker is arguing” (Toulmin, Rieke, & Janik, 1979, p. 13). This thesis holds that textual coherence is achieved through logical development of ideas and textual organisation based on a writer’s lexical, semantic, and rhetorical choices in anticipation of the audience’s needs (Grabe & Kaplan, 1996). Specifically, the study focuses on argumentative coherence, operationalised as logical semantic development and conceptual progression based on the Toulmin’s model. Discourse synthesis is defined as “an active process of text construction in which a writer reads textual sources on a particular topic, selects some of the available information from the sources and combines elements in a new way, providing an overall organisation as well as connectivity among related ideas” (Spivey, 1984, p. 1).

In this chapter, findings pertaining to the five case studies are presented case by case. Four main sections make up the findings on each case: (1) participants as readers and writers of English; (2) essay argument structure; (3) microgenetic findings; and (4) findings on developmental changes. A brief overview of each section is as follows.

The first section describes each participant as a reader and writer of English and covers perceived English reading and writing difficulties as reported in the interview (I)
and stated in their personal information questionnaire (PQ) as well as participant-produced classroom writing on topics such as describing writing difficulties (WD) and understanding of strategies (US).

The second section presents the findings on the essay argument structure from the Toulmin’s perspective of participants’ reading-to-write essays on child discipline. Elements of the Toulmin’s model in each essay were identified to show how the participants’ understanding of the model was represented in their writing. For their reading-to-write task, the participants were asked to discuss whether the proverb “spare the rod spoil the child” was still applicable in present times. They were also asked to read three source texts and draw on the information provided in the source texts and the task prompt to support their writing. Two similar proverbs (English and Thai) offered a pro-smacking stance, whereas the source texts provided opposed smacking. Note that physical punishment to children by their parents is not illegal in Thailand. Smacking is often used to discipline children in Thai households.

The third section centres on the microgenetic findings derived from each participant’s verbalisation data. The microgenetic analysis aims to present a detailed description of learning behaviour as it unfolds (Vygotsky, 1978). For the purpose of this study, the analysis was based on three functional dimensions of an action, i.e., orientation, execution, and control (Gal’perin, 1989). Each of these dimensions denotes a qualitatively distinct way in which the participants used verbalisation to gain control over a task and their own cognitive functions. The findings describe the process of how the participants conceptualised and created their essays, and their varying regulation levels (Aljaafreh and Lantolf, 1994). Specifically, this study examines three aspects of self-regulation during discourse synthesis: intertextuality; task representation; and logic, coherence, and revision. Intertextuality refers to various conceptual links between the reader, writer, text, and task (Gee, 2004). Task representation denotes how the task is interpreted and conceptualised by the participants (Flower, 1990). Logic, coherence, and revision describe how the participants made use of available resources and engaged in problem-solving during the task (Witte, 1983). Microgenetic episodes or excerpts are presented in order to illustrate emergent self-regulation in these areas. Omitted lines (...) are data not related to behaviour under examination or read-aloud data.
The fourth section describes participants’ developmental changes. In this study, development is evinced in the “emergence of new characteristics of thought, of higher, more complex, and more developed forms of thought on the foundations of more elementary and primary forms of thinking” (Vygotsky, 1987, p. 175). Development presented here encompasses: “(1) The shift of control from the environment to the individual, that is, the emergence of voluntary regulation; (2) the emergence of conscious realisation of mental processes; (3) the social origins and social nature of higher mental functions; and (4) the use of signs to mediate higher mental functions” (Wertsch, 1985, p. 25). Although there is no definite indicator or evidence of internalisation, Wertsch (1990) contends that learners’ ability to articulate what they know in their own words points to the possibility that internalisation may have taken place. The participants in this study were asked to express their new conceptual understanding and knowledge. Findings in this section are informed by data as reported by participants during the semi-structured interview (I), self-reflection form (SF), evaluation of the coherence SCOBA (CS), understanding of strategies (US), personal information questionnaire (PQ) as well as participant-produced classroom artefacts such as describing writing difficulties (WD).

Findings are illustrated by data segments. For interview data, numbers in parentheses indicate line numbers in their respective transcriptions. For instance, (I203) indicates line 203 from the semi-structured interview (I). Numbers for segments from the personal information questionnaire (PQ) show question numbers. For example, (PQ3) indicates an answer to question 3. Note that grammatical and spelling errors in the segments are original to participants’ writing. Statements marked (RT) are translated by the researcher while those marked (M) are derived from member-checking of data from various sources, and (M/RT) denotes translated statements made by participants during member-checking (conducted in Thai for ease and clarity of expression). The five cases are now presented alphabetically as follows.

5.1 Case I: Aoddy

5.1.1 Aoddy as a reader and writer of English

At the time of the intervention, Aoddy was in a second year of his PhD study. Aoddy described his English reading and writing as poor as he read and wrote with no specific goals. When asked about his reading goals, he replied, “I read read read no goal”
(I181) and “I reading no purpose” (I700). Even his weekly reading goal had been set by his supervisor: “My supervisor have ahh ahh me to read read about ten ten article” (I722). When asked about reading strategies, Aoddy stated, “what is learning strategies I don’t know” (I1773), “I don’t have ahh learning strategy about reading” (I178), and “I cannot find find find something I cannot know what did I read” (I708). Not having set reading goals, he did not know why he was reading, except for message decoding. As he tried to understand every word, his reading was often interrupted by grammatical and lexical difficulties. Aoddy stated, “I cannot understand vocabulary (I558)” and “I use Internet or dictionary” (I563). And if he still could not understand after using the dictionary, he usually put the text aside and read something else: “If I don’t understand, I’ll go” (I884) and “put it away I find another to read” (I886). Aoddy regarded his reading as poor and sought to improve this by reading online English articles, translating, and copying sentences he could use in his writing. He also read similar news from Thai and English newspapers to enhance his comprehension and vocabulary knowledge: “I reread and I can understand” (I1006).

During the intervention Aoddy regularly mentioned that his low oral proficiency affected his ability to discuss what he had read and written. Also during the interview, he talked about his low English proficiency and lack of prior knowledge of the concepts taught during the intervention: “Before I don’t know coherence” (I188), and “I don’t know what is academic writing” (I1770). Aoddy reported several writing difficulties. Asked why writing was difficult, he wrote that he was “weak in basic writing skill” and believed his lack of understanding of the writing process, together with lack of practice, resulted in poor writing. Furthermore, he regarded “grammar very difficult” and his vocabulary limited (WD). During the interview, he stated that he managed his PhD writing by translating from Thai to English and worked on the writing until he has exhausted his resources before turning to others. Aoddy explained, “I afraid about grammar” (I1194), and “I the first before I writing I think in Thai” (I1302) to form initial ideas before translating these back to English. And if he could not write in English, he translated what he had written back into Thai “to understand it again” (I1324). Aided by a dictionary, he translated back and forth between the two languages. When he could not do this by himself he then began object-regulated writing behaviour. He explained, “sometime I find article the same and modify” (I1346). Aoddy imitated and modified suitable sentences or phrases and used these to improve his writing. He copied frequently
used sentences and posted around his home office. He also turned to an online translation service. Following this, he posted his text online for peer feedback from his foreign PhD friends. It appeared Aoddy was unable to produce English text as well as he wished to, and his writing was largely object- and other-regulated.

5.1.2 Essay argument structure

In this section, the findings on Aoddy’s essay argument structure focus on logical development of ideas and argument coherence based on the Toulmin’s model. Unfortunately, Aoddy was not able to produce an essay of 250-300 words as required. His writing constituted a single paragraph.

Aoddy’s essay:

Aoddy began his writing by stating option A (smacking) (1) from the instructions, but the rest of his paragraph pointed to an anti-smacking stance, as shown from his rebuttal (2) onwards. Next, Aoddy managed to weave three pieces of information from Text A and B into his third sentence. He had selected salient points (hitting is not recommended, punishment is the least effective method, and punishment is not discipline) made by the original authors and organised these logically and coherently. In his third sentence, Aoddy used hitting, punishment, and discipline as lexical ties to ‘hold’ his text together. In this sentence ‘Hitting is not recommended (Clark & Ireland, 1994) and punishment itself is actually the least effective (NA, ND), which are not discipline’, Aoddy succeeded in maintaining the flow in the information.

Overall, the paragraph lacked Aoddy’s own text generation. It was based on patchwriting as evidenced by the juxtaposition of different segments from the source texts.
5.1.3 Microgenetic findings

Aoddy reported that his inability to ask questions affected his ability to communicate in his PhD class. This problem was shared with the researcher during his first attempt to use verbalisation when this strategy was first introduced. In class, Aoddy was unable to form interrogative sentences spontaneously.

**Purposeful imitation** (Aoddy’s case only)

Excerpts 1-5 provide evidence of object-regulated but purposeful imitation as Aoddy attempted to master interrogative sentences by first relying on the questions provided as examples for reading before beginning to modify the model questions to suit his reading purposes and, eventually, his writing purposes. The remaining excerpts provide further evidence of these efforts but also highlight Aoddy’s self-regulation regarding: intertextuality; task representation; and logic, coherence and revision (Appendix O for verbalisation transcription conventions).

**Excerpt 1**

From the very first moment Aoddy was left with the task, he immediately pulled out the self-questioning list (QL) and put it on top of other notes and classroom materials. Before he started to read, Aoddy glanced at the QL and asked “What is this text about?” (2). He then glanced at the text from top to bottom and asked another question before saying that it was a reading-to write-task. The fact that he posed these questions from the moment he approached the task indicates that he had already begun interacting with what he was about to read through verbalisation.
Despite reading aloud “Introduction”, Aoddy did not benefit from the sub-heading ‘Introduction’ designed to orient his attention to the task to be completed. Next, he tried to work out the title, uplifting the question from the QL (6). He read silently for 3 seconds, suggesting the question served to orient his action. Aoddy could not answer this question and decided to continue reading (level 2 regulation/problem noticed/unsolved). Next, Aoddy came across ‘punished’. He reread this word but could not work out the meaning. He then modified another question from the QL. The original question was “What is the meaning of this word?” Here, Aoddy said “What is the meaning of punish?” (9-10). It was evident that Aoddy had already incorporated ‘punish’, the unknown word, into his question. Aoddy indicated that he would seek help from the researcher (other-regulated) but did not ask for assistance, suggesting orientation did not lead to action. Another interpretation could be that he decided to tolerate ambiguity and abandoned the idea of seeking external help (level-two regulation/problem noticed/unsolved).

Next, Aoddy came across another unknown ‘smack’ and reread it (12). He missed the clue ‘smacking or hitting’ which could have helped with his comprehension. Aoddy searched the QL for appropriate questions. He then asked “How does this paragraph tell me?” (14), and although the question was not grammatical, it appeared to be verbalised in response to Aoddy’s inability to understand the text. While his dependence on the QL, that is, object-regulation, became more evident, his questions were timely.
Excerpt 2

In Excerpt 2, Aoddy made a point of posing questions concerning the time permitted. Prior to task commencement, it was explained to him that he had 10 minutes to read the instructions and 45 minutes to write a paragraph or one and a half hours should he decide to write an essay. Also, the last sentence on the instruction clearly stated the time (60). Despite having the information right in front of him, Aoddy had made three attempts at generating his own question. Before successfully locating the question he wanted from the QL, Aoddy said, “How long ahh how long I can have a time? How long? How long?” (57-58). He posed these questions not because he needed to know the answer. Member-checking revealed that the presence of the answer induced the desire to practice forming a question.

After searching the QL and having decided on which question to use, Aoddy then changed the context of the question from reading to writing. “How much time do I have to writing of writing?” was modified from ‘How much time do I have to read this?’ on the QL. Aoddy also faced a problem of finding the right preposition and the correct part of speech. He could have used “How much time do I have to write this?”, and his question would have been perfectly formed, but as he used ‘writing’ instead of ‘write’, he struggled with the prepositions ‘to and of’ writing, indicating that while Aoddy attempted to produce an interrogative sentence he was also monitoring whether his question was grammatical.

As Aoddy finished reading the instructions, he appeared to focus on mastering self-questioning as he read. His verbalisation (55-57) showed he knew he had to read and
use the information in the source texts in his writing and that he could choose to either write a paragraph or an essay (60-62).

Excerpt 3

In Excerpt 3, while Aoddy continued his object-regulated behaviour and relied on the QL for most of his questions, he appeared to be asking and answering his questions more often, instead of just saying the questions aloud and continuing with reading as seen in the first excerpt.

63 Umm (reached for the source texts/ST) ST This this text OK
64 QL → ST Oh what is the what is the text about? ST Text A, B, C
65 (pointed at texts) ST Oh there are 3 texts 3 texts for me ahh.
66 QL Who wrote this? A Essortment. QL ↔ A OK have I read this
67 this text A before? QL ↔ A What what type of the story is this? It is the story is (whispered) A1 If you child is (...) punished
68 A1 Punished punished punished punished punished punished.
69 QL What is the meaning of A punished? (rocked his head left and right) A1 Punished punished. OK. Umm QL → A OK cross this
70 (underlined ‘punished’) Can I underline punishing? (pointed at ‘punish’) A1 Punished for something ahh his ahh he didn’t he did not, he begin to see punishment as unfair, rather than a fair consequence to an inappropriate (pointed at ‘inappropriate’)
71 Ahh QL Ahh what is the meaning of inappropriate? Ahh QL Can I
72 underline this? (underlined ‘inappropriate’) A1 It give the child no it give the child no incentive. Incentive I think it’s a benefit to behave better. (Cleared his throat) A2 Punishment itself is actually the least effective method of discip. The most effective met method is positive reinforcement reinforcement that is making a point to let the child know what that know that.
73 QL What is the sentence meaning? A2 Umm (shook his head) QL
74 (…..) Umhm umhm umhm QL OK? Should I read B text B?
75 QL → B Text B first yes. B What will help my child learn not to do it again. QL → B What does this what does the title tell me
76 QL I think I ahh. (searched for appropriate questions) QL → B
77 Have I read before? B1 When your child become mobile. Move.
The above excerpt shows Aoddy’s verbalisation as he approached the source texts. Aoddy saw there were three texts. He asked about the author of Text A and answered this coherently. Again, his question (66) could be part of his questioning practice as the answer was clearly stated in the citation. Next, Aoddy appeared to be getting more frustrated with the word ‘punished’, the same word he did not know that first appeared in the introduction. Aoddy still had not worked this one out (level-two regulation). He said this word repeatedly. He also underlined ‘inappropriate’. Aoddy understood ‘incentive’, whispering to himself “I think it’s benefit to behave better”. Then, he came across another unknown word ‘reinforcement’. He read this twice (81) but stopped reading and posed a question (83) before he finished the sentence, indicating that he monitored his comprehension. At the point of comprehension breakdown, he abandoned Text A and began Text B (84). As he read the title, he asked “What does this what does the title tell me?”, and, although Aoddy picked the questions from the QL, it appeared he knew which question was suitable at any given moment. He also understood the word mobile, saying this in his own word “move”. This utterance appeared as private speech and showed Aoddy had begun to interact with his reading and himself.

Excerpt 4

While Aoddy continued his object-regulated behaviour imitating questions from the list, increasingly he was able to modify more complicated questions, deleting and substituting certain words to suit his purposes. For instance, “What is the sentence tell me?” (96-96) came from ‘What does the title tell me?’ on QL. As he skim-read, he missed the intra-sentential context clue showing the link between punishment and hitting (97-98). Aoddy appeared to focus on the second half of the sentence and acknowledged that hitting was not recommended (98-99).
In Excerpt 5, Aoddy reread Text A and used the Toulmin’s model (TM), at which point he produced a self-generated question and posed this repeatedly as he sought to gain control over the task (144-145). While his object-regulated behaviour continued, Aoddy demonstrated his ability to adopt a longer and more complicated question from the QL and modify this to suit his context. Although Aoddy was still imitating and selecting some questions straight from the QL as a means to form an orientation basis for his action, he began to contextualise these questions. During execution, not only did he change the context of self-questioning while reading, as shown on the QL, to questioning while writing, he also managed to link them directly to his immediate activity. For instance, as he was looking at generating ideas about ‘parent’ (146) but did not have the right vocabulary to create a sentence, he then asked “What is the main verb sent ahh the main verb of this sentence? main verb of the parent” (149-150), which showed Aoddy was applying the question to the context of his writing. During control, Aoddy then monitored his action (153-154) before declaring he was unable to write. This question “Have I got anything going wrong?” was modified from ‘Have I got everything right?’ listed on the QL underneath ‘What is the main verb of this sentence?’, uplifted a moment earlier. So far, Excerpts 1-5 have shown Aoddy’s object-regulation in asking questions. The following excerpts focus more specifically on intertextuality, task representation, and logic, coherence and revision.
5.1.3.1 Intertextuality

Aoddy demonstrated nascent self-regulation over intertextuality by linking what he read to his prior knowledge, making connections across texts and paying attention to the source references (authors and years). The following excerpts show that Aoddy’s efforts were not always successful and often not followed through.

Excerpt 6

right. If you don’t use a stick to hit a child, he will be out of control. In Thai, we say rak wua hai pook rak look hai tee look hai tee rak look hai dee doo hai tee love your child smack him to make good Doo hai dee tell off/to be firm to make good

In Excerpt 6, Aoddy understood the Thai proverb ‘love your child, smack him to make good’ as well as the concept of child discipline as shown in his own words “Doo hai dee” (23) (to be strict or firm, for instance, telling a child off to make good), but this insight did not help him with the vocabulary problem. This indicated that Aoddy did not make the connection that the Thai proverb was equivalent to the English proverb “Spare the rod, spoil the child”. In the task prompt, the English and Thai proverbs are shown side-by-side.

Excerpt 7

As Aoddy continued with Text B, his question indicated lack of comprehension (104). Next, Aoddy attempted to self-regulate his reading by questioning whether Text A and B were connected in any way. His question “How does the Text B relate to Text A?” was modified from ‘How does this text relate to the first/second text that I’ve read?’ on the QL. Aoddy reflected on both texts but was unable to identify the relationship (level-
two regulation/problem noticed/unsolved). Next, he abandoned Text B and started Text C (105), repeating similar behaviour shown in Excerpt 3 (moving from Text A to Text B, 84-85).

**Excerpt 8**

Excerpt 8 shows Aoddy understood little of the source texts (114). He demonstrated object-regulated behaviour, searching for material he could use (116, 117, 121-122). He reread the instructions briefly before checking the source citation of Text A, B, and C. Next, Aoddy struggled to brainstorm (126-127). He then reread the instructions silently but still could not understand them (131).

**5.1.3.2 Task representation**

Aoddy did not read or understand the instructions thoroughly enough to form a coherent task representation, and ended up writing a summary rather than an argument essay. The following excerpts highlight Aoddy’s lack of understanding of the task prompt.
Here, Aoddy uplifted another question from QL, ‘What should I do?’ (27), indicating that he had monitored his understanding of the instructions and orientation towards the task. Following this, Aoddy did not read the instructions carefully and skipped the sentence ‘Do you think these old statements are still appropriate nowadays?’ which was a crucial orientation basis to his writing task. He read part of this statement (27), articulating the first few words, but failed to finish it. The sentence remained unnoticed for the duration of the task. Next, he returned to his reading and questioned whether he should summarise what he had read so far (28). Aoddy did not summarise and became concerned with the time (29). His statement “Ten minutes also five” denoted abbreviated private speech, acknowledging that he had used up half of the 10 minutes reading time and still had another five minutes left (M). Aoddy then reread the statement ‘What do you think?’ (30). Again, he did not finish the sentence and moved on to consider option A. Unfortunately, Aoddy did not understand Option A. In fact, he continued to struggle with this option as shown later in his verbalisation below.

Excerpt 10

Excerpt 10 shows that much later during the course of his writing activity, Aoddy still struggled to comprehend his chosen option (level-two regulation/problem noticed/unsolved).
Excerpt 11

In Excerpt 11, Aoddy read Option B. He stated that he understood this and that he could change his mind later and did not have to commit to Option A or B straight away (36-39). He pointed at the source texts (41), indicating he knew from where the information should come. His understanding, however, did not cover the task of considering whether the proverb was still applicable. Aoddy acknowledged “the job” (46) of reading-to-write but was unable to construct a clear task representation as evident in his last two questions adapted from the QL (45-46).

Despite his poor task comprehension, it was evident that self-questioning was beginning to come under Aoddy’s self-regulation. Aoddy was beginning to modify rather than repeating the questions word-for-word. For instance, “What does I should to do?” (45) was adapted from ‘What should I do?’ and “What the writing is about?” (46) from ‘What is this text about?’ on the QL. Although these questions were ungrammatical, Aoddy had succeeded in adapting a number of QL questions for reading to fit his writing activity. He also appeared to engage with his self-questioning more. “What does I should to do?” came before “What the writing is about?” Thus, it appeared Aoddy knew writing was what he should do. He also answered his question, referring to writing as “the job” (46), meaning the writing task he had to complete.

Next, in Excerpt 12, Aoddy sought to regain control over the situation and oriented himself by imitating instructions from the self-instruction list (SL). Having deliberately included the SL in the stream of his activity, Aoddy first instructed himself to read Text A (194), adapting his statement from ‘I should read this again’ listed on the
SL. He then contextualised the instruction further by adding “I think” (195). Next, he asked “What is the meaning of this sentence?” (197-198), modified from ‘What is the meaning of this word?’ on the QL. While his object-regulated behaviour still prevailed, it appeared Aoddy was working on bringing self-questioning and self-instruction under his own regulation. As he reread Text A, once more, he was affected by his lack of understanding of ‘punishment’. His question “What is the meaning of punishment?” (202) led to a meaningful response as Aoddy was able to locate an appropriate segment in Text A which said punishment was actually the least effective method (203).

Excerpt 12

Unable to generate his own ideas, Aoddy summarised Text A (206) by underlining the topic sentence in paragraph two. However, Aoddy never finished reading Text A. He then switched his attention to the task prompt in order to understand his task. His statement “Read instruction and get my task” (209-210) suggested that he understood the orienting quality of the task prompt. It also indicated that Aoddy was displaying a degree
of self-regulation by monitoring his performance. He realised that he was not doing well and was taking a step toward the solution. Aoddy went back to the instructions and rereading appeared to orient his action. As the use of source texts was specified in the instructions, Aoddy immediately returned to the source texts (213). At this point, Aoddy had not realised that he must choose Option A or B and use the source texts to construct his argument to support his decision in relation to the English and Thai proverbs.

Excerpt 13

Here, Aoddy about to begin his first draft (D1). He posed an ungrammatical yet appropriate self-generated question as he looked for a text entitled ‘Internet Use’ (IU), used in class for a textual coherence analysis exercise. Aoddy’s statement “I use everything” (226) indicated that he was aware of his intention as he looked for learning materials that might be useful. Next, he was two-minded whether to read or to write and decided on the latter as he did not have much time. This signified self-regulation as Aoddy sought to gain control over his action and was able to make an informed decision. Next, he positioned IU in clear view. He then decided he must choose Option A or B (233), indicating that he was beginning to understand the significance of these options to his argument position. Unfortunately, he was still unable to fully comprehend Option A.
Excerpt 14

Excerpt 14 provides evidence that although Aoddy was unable to understand option A, he continued to bring self-questioning under his regulation. From the QL, he uplifted ‘What is the meaning of [this word]?’ but contextualised this by ending the question with ‘text A’ rather than ‘this word’ as shown on the list (240-241). At this point, the researcher showed him a sign that he could verbalise in Thai, but Aoddy did not take it up. Next, his self-generated question “What is smack mean?” (246-247) shows he was still unclear about the meaning of ‘smack’ (246-247). Despite his lack of understanding, Aoddy copied Option A onto his draft. His rereading of the instructions saw him deciding on option A and posing a task-relevant question without relying on the QL.

5.1.3.3 Logic, coherence, and revision

Despite his poor task representation, Aoddy attempted to write coherently and to develop his paragraph logically. He paid attention to how to integrate segments from different source texts and tried to connect different ideas. He also sought to incorporate the Toulmin’s model in his writing. Unfortunately, it appeared his low oral proficiency and vocabulary difficulty hampered these efforts. Meanwhile, he continued to focus on forming interrogatives.

In Excerpt 15, Aoddy’s inclusion of the TM in his activity appeared to enhance the orientation basis for his writing action. Aoddy demonstrated his understanding of claim by linking this to the main idea (137) and was able to narrow his focus to “talking about children” and “take care of children” (137-138). Also, Aoddy pulled out the
coherence SCOBA (CS) (140). He knew from the CS that he must state his topic sentence (141) and from the TM to begin with his claim or main idea (141-143) (object-regulation).

Excerpt 15

window) IS I can read. I can I use. OK. Can use argument writing that teacher written? Yeah. (pulled out Toulmin’s) TM First Claim. TM What is the claim? (looked at the blank sheet) TM What is the claim? What is the main idea? IS Talking about children. IS Take care children TM What is the claim? IS What is the main idea? (read source texts) B Uhhh … IS (7 seconds) TM What is the claim? (pulled out the SCOBA/CS) CS paragraph has a topic sentence. OK. TM What is the claim? (looked at the blank sheet) Uhh I should be beginning. I should be beginning. Main idea. Main idea. The first paragraph is the introduction.

Excerpt 16

A → IS Cannot. IS This text. You cannot decide you can wait until after. I QL IS Umm IS Plan your “First intro” (wrote 1) Intro “Second” (wrote 2) (scratched his right ear) “Intro” IS ah “Intro” parent. No. BS “Parents children” “Parents children” BS “Intro about parent children” ahh about “punish punish” about smack ahh “smack” must intro smack (put ? at the end of ‘punish’ and ‘smack’) Second ahh TM Claim. Ground. B Yeah use everything. Ground TM statement of evidence B Clark Oh OK C set basic right everyone. They want to sure. (ran his pen over the text as he read) C What is the the sentence tell me? What? Umm OK It tell world leader approve. Umm (looked out the window briefly) Who is? C 2000 (ticked 2007) What is the year of text A? A 2010 Umm (ticked 2010) TM → A Warrant sentence. What is the warrant sentence? Second (whispered)

BS Second is umm. (IS → ST) Oh what? QL Can I write? QL Can I write? B …OK BS “How about” B ….. Umm BS “positive” “about positive” and (drew ) think about and ahh and children and “child learn learning” (put this under 2) There
In Excerpt 16, further object-regulated behaviour was evident as Aoddy literally used the instructions to orient his brainstorming. Immediately after reading ‘Plan your writing’, Aoddy began to organise his writing (159), which meant orientation led to execution.

Next, Aoddy also demonstrated control by assessing his work and added ‘children’ after ‘parents’ (161). Next, he wrote ‘punish?’ and ‘smack?’ on his brainstorm (161-162). As these words repeatedly appeared in his reading, he recognised that they were important even though he did not understand them (M). Aoddy then returned to the TM. His reading of ground (163) served as another orientation basis supporting his execution of another action, quoting from Text C. The application of the TM showed that Aoddy was looking for possible solutions to his inability to generate ideas. He appeared to be orienting himself towards the rhetorical organisation of what he was about to write.

Also it appeared Aoddy was beginning to self-regulate following self-questioning. Noted features of his execution was that Aoddy was making progress as he was able to generate several questions by himself. For example, “What is the year of text A?” (167-168) and “What is the warrant sentence?” (169) were appropriate to his needs. Furthermore, Aoddy appeared to be interacting with the task at hand in a more meaningful way through verbalisation by answering his questions in a coherent manner. For instance, “What is the the sentence tell me? What? Ok it tell world leader approve” (165-166) indicated that he followed through with his question, and “Oh what? Can I write? Can I write? OK How about umm positive about positive and think about and ahh and children and child learning” (170-173) also indicated that he continued the chain of thought after he had posed the question.

**Excerpt 17**

(wrote ③, left 3 lines and wrote ④  In conclus.(leaned back)
 What QL  →  BS  is the end of sentence? “Conclusion”
 BS  Introduction (pointed at his writing with his pen) IS  Ahh the third paragraph. IS  What is the third paragraph?
 ST  →  BS  Condition? I think this ahh TM  Ahh backing? TM  Umm.
 BS  OK this can be “Backing sentence” “Backing sentence”

Excerpt 17 provides evidence of Aoddy’s attempt to generate his own question by imitating the QL and to use the Toulmin’s system in his writing. Aoddy was able to
successfully ask “What is the end of sentence?” (175) and “What is the third paragraph?” (177). These two questions were adapted from ‘What is this text about?’ and ‘What is the title?’, listed at the top of the QL. Evidently, the list served as an orientation basis for Aoddy’s execution of his questions, and it appeared Aoddy was beginning to internalise What + is + noun?, a basic interrogative structure. While Aoddy could have memorised this structure, the fact that he managed to answer both questions meaningfully with “conclusion” (175) and “Ahh backing” (178) respectively indicated he had not. As the questions and answers appeared to cohere, this pointed to internalisation with understanding rather than mindless copying. Also, Aoddy consulted the source texts (ST) and the Toulmin’s model (178), indicating he was working on both content and structure.

**Excerpt 18**

183 (searched through his pile of supporting documents) Where?
184 Where? Where? Where? Where? Where is sample coherence? Where is sample coherence? Where is sample coherence? Where is sample coherence? (pulled out sequential progression sheet) Sequent progress. Sample coherence. Ohh BS “parent children” (pointed at his text with his pen) OK (left 3 lines under  and drew a line across the page)

In Excerpt 18, Aoddy continued his object-regulated behaviour. He wanted to use sequential progression in his writing. He searched frantically for model texts used in class for textual coherence analysis and repeatedly asked “Where?”, which could indicate his frustration (184-185). Next, Aoddy was able to ask a perfectly formed question (185). Once he had located the sequential progression example, he checked it against what he had written and was happy with the use of parent and children (187-188).

**Excerpt 19**

In Excerpt 19, Aoddy struggled to conceptualise his argument. He appeared to be experiencing a lot of stress and began to mispronounce “punish” as “finish” repeatedly (255, 261-264) without noticing that he had made a mistake (level-one regulation/problem unnoticed). Aoddy also expressed his self-assessment that he could not write (256). His question “Uhh what is I should do write?” (256-257) was posed directly after his self-assessment, indicating his effort towards self-regulation.
Aoddy’s attempt to think and to write logically was indicated by his question “How does this text related for parent can first paragraph?” (258-259). Note that Aoddy managed to form this question after several attempts. First, he uplifted ‘How does this text relate’ from the QL. He then repeated this segment before looking at his draft and finished his question, seemingly in abbreviated private speech as he only articulated ‘parent can’ from option A. He then looked at the QL before turning to his draft and asked “What the next sentence?” (264-265). Although this self-generated question was ungrammatical, it was appropriate at the point of execution, indicating that Aoddy was oriented toward task progression.

Excerpt 20
Despite his unclear understanding of ‘punishment’, Aoddy was able to grasp that punishment was not positive (269). Line 270 indicated abbreviated Aoddy’s private speech and generalisation that “[the child should] not [be] finished [punished] for everything” (270). Next, Aoddy linked punishment to the notion that parents knew best (272). This indicated he was related this to a common Thai concept that parents know what is good for their children. Having stated that parents knew best, Aoddy then posed a question “How does he know?” from the QL. Although this question seemed to cohere with parents knew best, Aoddy then posed a question “Can I use socherence?” (274), modifying this from ‘Can I use this?’ listed immediately after ‘how does he know this?’ on the QL. This second question oriented Aoddy once again towards object–regulation as he searched his documents to “find a case for help” (276). He then posed another question “Is this true?” (277-278), located near his previous two questions on the QL. As questioning whether the child was punished was true or not did not appear to have any conceptual consequence, it appeared to be part of his self-questioning rehearsal.

In Excerpt 21, Aoddy copied sentences from Text A onto his first draft (D1) and showed his intention to acknowledge the source by leaving some space for it (289-290). Next, he reread the instructions and returned to his draft before posing a question from the QL “What is the main idea?” and stating that he did not have one. This excerpt shows Aoddy’s awareness of his inability to conceptualise his main argument position. So far, his writing was nothing more than a combination of sentences from the source texts.

**Excerpt 21**

```
284 something” ahh “is punishing for something.” “The child is
285 finishing for something.” A2 Ahh The most effect method is
286 positive enforcement. (...) A2 ➔ D1 “The most e- effective method
287 method is post (deleted ’post’ misspelling) positive reinforce
288 enforcement.” IS Positive enforce for enforcement. IS Umm umm
289 (looked up) IS for enforcement umm (looked up) D1 (put a
290 bracket indicating intention to cite the source of information)
291 (sat back and cleared his throat) IS revise edit. D1 (left one line
292 and drew 2 lines across the page) QL Umm (...) do I have? Umm
293 QL ➔ D1 What is the main verb of this sentence? QL ➔ D1 What is
294 the main idea? I don’t know main idea.
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In Excerpt 22, Aoddy looked at his draft (D1), the source texts (ST) and the self-questioning list (QL). He then asked “Is this important?” referring to the source texts (296) before saying that he would skim read again. However, Aoddy did not carry out the action (skim reading) as oriented. He appeared to be experiencing a lot of stress and sought to regain regulation through self-instruction, uplifting successive statements (296-299) from the self-instruction list (SL), none of which was actually carried out (level-two regulation/problem unsolved). So, this was another instance of orientation without execution. Next, uplifted from the SL, the statement “I will put this information in my writing” indicated that Aoddy intended to draw information from Text B (300). Aoddy then immediately returned to the SL and said he should ignore Text B (301-302). His behaviour indicated he did not know what he should actually do or which information he should use. Despite this, he continued with his task, and progress was detected when he gained a sense of direction and decided to copy and link source information together (302-304). He confirmed that he had chosen Option A, and intended to rewrite (307).

In Excerpt 23, Aoddy continued his object-regulated behaviour. He relied on his Internet Use text (IU) to complete his sentence. Here, Aoddy demonstrated self-regulation with regard to academic language by choosing “states” instead of “tell” (313-314). Aoddy then demonstrated control by confirming that his lexical choice was appropriate (315). Next, he oriented himself toward further action by asking if he should copy Text C first
This orientation did not lead to copying action. Instead, Aoddy redirected his attention and searched for the next instruction from the list before deciding to reread (316). Although Aoddy appeared to switch from one action to the next, this was not altogether unfruitful. His behaviour could be interpreted to indicate Aoddy’s realisation that he should reread to understand before he began copying Text C. This showed that the use of source information was beginning to come under Aoddy’s regulation.

Excerpt 23

Excerpt 24 shows Aoddy thinking about coherence. As he copied a sentence from Text C, he considered how it related to his previous sentence. This indicated his effort to ensure that information would flow smoothly from one sentence to the next. Although Aoddy was unable to demonstrate control over the task as a whole, he endeavoured to take control over how different segments from sources were pieced together, denoting different levels of regulation over different task aspects.

Excerpt 25 shows Aoddy working on putting pieces of information from different sources together. He demonstrated awareness of textual coherence by checking whether different text segments followed one another logically (342-344). Next, he intended to rewrite (345). His self-instruction served as the orientation basis for his writing action, but before the execution of this action, he changed his focus to understanding the text. One interpretation for this is that before the actual execution, Aoddy monitored his
decision and deemed it inappropriate to act at that precise moment. Another interpretation is that he continued to orient himself until he was able to execute a suitable action.

**Excerpt 25**

340 to’) C Umm hmm (tapped repeatedly on text C with his left
341 index) A(…) QL(…) Uhh STDo I QL do I ST understand it
342 QL correctly? SL(...) Umm I can put this here? B No. (pointed at
343 text B and text A) It’s not related. If I can put here (pointed at
344 text C) it’s not related too [either] SL(11 seconds) Ohh I should
345 rewrite. (scratched his head) I should rewrite it. C (...) Umm
346 OK. QL(...) Umm what does ST this mean? Umm what does this
347 word refer to? (picked up ST read close to his face) B(...) Uhh what?
348 B2 Communication, recommend, introduce, recommend is not recommend. OK Umm D1 Many people
349 “Many people” B “Many people” recommend D1 Oh no cannot
350 recommend (crossed out ‘Many people’) B ↔ D1 “and” (deleted
351 ‘and’) Say Clark B ↔ D1 “Clark and Ireland recommend”
352 “recommend” “Clark and Ireland recommend. Clark and
353 Ireland recommend.” B Recommend (…) B Nothing hits (…)
354 nothing hits. Ohh D1 What is the word.. I should to write?

**Excerpt 26**

370 repeatedly) Umm I think something’s wrong here. C2 Often do
371 not consider them. Adult often do not consider them. D1 Where I
372 can put? D1 Where I can write this sentence? Ohh (looked up)
373 Umm I have a little time. (looked at his watch) D1 A few time
374 for me to write. I think I cannot write everything here. (looked

In Excerpt 26, Aoddy was aware that his first draft (D1) was not going well (370). He then considered another segment from text C but was unable to find a suitable place to integrate it (372), indicating his awareness of coherence. Aoddy was also mindful of the time constraint. His statement that it was not possible to include everything demonstrated his self-regulation over time allocation.

In Excerpt 27, Aoddy worked on his second draft (D2). He was able to generate his own questions (397-399) without consulting the self-questioning list and to self-instruct to reorganise his writing (400-402). Aoddy also attempted to generate ideas
from the source texts, trying to work out how a segment in Text C may be combined with another in Text B (403-404). He wondered if “punishing can help and will help [support] basic right”, but was unable to clearly conceptualise the relationship between the two text segments (level-two regulation/problem noticed/unsolved). He was aware that the two do not represent logically connected idea units as shown in his statement: “maybe thing is wrong” (407). Despite his inability to form a connection that punishment by smacking and basic human rights of the child were contrastive viewpoints, Aoddy demonstrated his increasing regulation over content generation, abstraction and generalisation (no matter how inconsequential) as opposed to simply copying information from the source texts.

Excerpt 27

Next in Excerpt 28, oriented by a question on the argument checklist (AC) (427-428), Aoddy checked the logical progression and main idea of his second draft (object-regulation). It appeared he was not confident that his text was logically connected (428). He then corrected a spelling error (430) (self-regulation).

Excerpt 28
In Excerpt 29, Aoddy identified option A as his main idea or thesis statement (448-450). He then included the citation before posing questions whether he should rewrite another draft (453-454). Note that his questioning was still object-regulated as he continued to rely on the questioning list.

Excerpt 30

In this final excerpt, Aoddy worked on his third draft (D). He checked the plural form of ‘rights’ (472) and indicated his understanding that the sentence was positive (417). Next, he returned to Text A, but was unable to comprehend it enough to be able to make use of the information (level-two regulation/problem unsolved).

Aoddy was aware of his inability to understand the source texts and his lack of progress in text generation. Given his evident frustration, his statement “I cannot write the better than. I cannot writing better than” (478–479) may be an instance of abbreviated private speech, meaning he could not do any better than what he was doing. Nonetheless, Aoddy decided to rewrite. Following this, he produced a single cleaner paragraph with virtually no changes from the previous draft.
In summary, Aoddy’s microgenetic data provide a very interesting aspect of goal-directed behaviour. Despite his low English proficiency, Aoddy continued to verbalise in English throughout the task. He had set his learning goals to practise asking questions (stated in his self-reflection form) and to become more fluent in speaking English (reported during the interview). After being reminded during the task that it was all right to use his first language, he continued to verbalise steadily in English with or without the researcher being present in the room. He deliberately did not switch to verbalising in Thai, and had only uttered a few Thai words for translation purposes during the task. It appeared that by the time he had read the task prompt and the source texts provided, Aoddy still had no clear conception of his argument stance. Poor comprehension led to poor task representation and Aoddy ended up writing a summary rather than an argument. It appeared that he struggled to cope with his reading-to-write task because he understood neither the task nor the source texts well enough to write an argument essay.

5.1.4 Developmental changes

Aoddy perceived his development in his understanding of verbalisation and goal-setting. When verbalisation was first introduced, he volunteered to practice verbalisation in front of the class and made explicit his goal to master the interrogative form. Aoddy had a positive attitude towards verbalisation: “I like verbalisation. It is useful for developing self-regulation.” Also, “I must use verbalisation both self-questioning and self-instruction very often” and “If I apply this strategy often, my English will definitely improve” (SF/RT). Microgenetic data showed Aoddy began using self-questioning from the first moment he approached his task. Unfortunately, his low oral fluency prevented him from using verbalisation to self-regulate effectively. Reflecting on his strategy use Aoddy wrote: “I asked myself (self-questioning and self-introduction [sic]) I followed my list to practice self-questioning” (SF). Although Aoddy also relied on the self-instruction list, it was clear that he depended on the question list more than the self-instruction. This was because self-questioning was his main learning goal built into his activities throughout the research project. As Aoddy appeared to be operating at the lower end of his ZPD for self-questioning, he could verbalise mainly by imitating the questions listed on QL and the argument essay checklist. It appeared, at this level, verbalisation did not significantly contribute to his self-regulation over discourse synthesis. Nevertheless, Aoddy believed better outcomes could be achieved through deliberate strategy
application and rehearsal: “writing is not difficult for me if I use learning strategies and practice more” (WD).

The second development Aoddy described was his goal-setting behaviour. Prior to the intervention, Aoddy read and wrote with no specific goals other than to finish the task: “before I not set goals” (I1054). Following the intervention, Aoddy reported: “I read follow my purpose” (I1120), “I finding main idea” (I1122), and “I summarise for writing” (I1126). He also kept in mind the Toulmin’s model. As he read, he looked for evidence: “When I join this project” (I713), “I reading I have a reading purpose” (I715), and “When I read article I can can find evidence for supporting this theory” (I751). Using the Toulmin’s model in his literature review to “write reasons about different part” (I241) was another deliberately set goal. Aoddy also reported that he only learned about coherence from the intervention. Since then he set a goal to apply this knowledge in his PhD writing and received positive comment from his supervisor suggesting that he was able to successfully use his knowledge in a new situation: “Prior to the intervention, nothing was clear about my writing. After the intervention, I am more disciplined and my writing becomes more structured and is of better quality” (M/RT), “because my supervisor told me” (I218). Aoddy described how he used the coherence SCOBA: “when I use I bring your paper I read and use” (I1595) and “check step by step” (I1599).

5.2 Case study II: Aum

5.2.1 Aum as a reader and writer of English

Aum described her pre-intervention reading behaviour as “just read and try to understand every sentence” (I141). Aum believed text contained facts and it was the reader’s task to understand this information. Asked if she believed that all texts were true, Aum said, “I always believe” (I1694) and “Yeah because we don’t know well about English” (I1701-1702). Aum also believed that texts were usually well written and comprehension breakdown usually resulted from “ourselves not good English” (I1711). Aum viewed reading as passive because the writers “just write it down and then we read” (I724) and “not think about where is the grammar where is the vocabulary that we have to use” (I726). For her PhD reading, Aum read very slowly and tried to understand every word: “with the vocabulary I didn’t know I just to open the dictionary” (I173-174). Frequent stopping resulted in poor concentration because “after that we find something stuck and then go to the dictionary and when we lost our concentration” (I177-178).
While completing her MA at an American university several years earlier, Aum simply read and summarised. When reading multiple texts, Aum did not compare or contrast various viewpoints: “for example I read five text so I just read one text and then this book what is this about but I did not connect all books or what is the same thing what is the different thing between the book” (I898-902). She described her reading as “read read and not understand but know what is this sentence is translate in Thai” (I1176-1177), “but not understand what is the meaning of the purpose of the writer” (I1179). Aum read silently and passively and did not know she could use self-questioning to monitor her comprehension: “self-questioning I never know that before (I159) and “I didn’t know that ahh when we read we need to ask ourselves that umm do we still understand that the text try to speak out” (I166-167).

Aum described her role as a writer prior to the intervention “like the recorder sentence order” (I200). She normally wrote for the purpose of recording or keeping order of known knowledge or facts and was not aware of how her thoughts evolved during writing. Aum found English writing “very difficult”, pointing out that she had trouble with “how to organise the ideas. Before writing I will have many ideas and thinking only about how can I write as much as I can instead of thinking about the quality of my writing or the main idea of the writing” (WD). She was afraid of making mistakes while writing, calling this “the fear factors such as fear about the grammar, vocabulary, and spelling” (WD). Also, Aum lacked writing purposes and compensated for this by writing as long as possible: “I focus on the quantity” (I207) and “if we can write very long so maybe we can get more score” (I214-215). Aum only wrote when instructed. “I just write when I was ordered to write” (WD). Aum’s main PhD writing task was critiquing research articles. She struggled with both reading and writing: “I have to know about the review and critique the article a lot but you know I did not understand. Just know but not understand” (I1557-1559).

5.2.2 Essay argument structure

Aum began her essay by stating two claims expressing her understanding of the difficulty parents usually faced when looking after children and pointing out that children, due to their lack of awareness of danger, often put themselves in potentially harmful situations (1-2). Next, she supported her claims with an example of children imitating their mother and playing with a knife (3-4). In describing this family-based scenario, she
succeeded in showing empathy for parental responsibility in keeping children away from harm. This example then led to her concession that parents might hit children to keep them from danger. Here, Aum stated two sentences (5&6) as her warrants. First, hitting was a form of discipline widely used by Thai parents and second, parents wanted to protect their children. Her anti-smacking stance was implied in her introduction when she claimed that “parents do not have the right to hit their children and it is not the effective way to prevent children to get hurt” (7). She further supported her objection to smacking by pointing out possible ramifications of disobedience and aggression consequent to physical punishment.

**Introductory paragraph:**

While this first paragraph provided some background information on looking after children, it did not state the main thesis; Aum’s anti-smacking stance required interpretation or inference from the reader. By the time the whole introduction was read, the reader might infer that Aum had opted to argue for option B from the instructions.

Next, Aum began her second paragraph by providing supporting evidence for her claim that parents did not have the right to hit their children (10). This supporting information was, however, located in a different paragraph from where the claim was made. Having cited the law on human rights, Aum went back to the point made earlier in her introduction, making another claim and condemning smacking as ineffective (11). It was clear that the first and second sentences contained different sentence topics which did not cohere, so the focus of this paragraph was not maintained.
Second paragraph:

Aum then claimed that punishment without explanation could cause misunderstanding and illustrated this with another mention of a knife and how to keep children safe (12-14). Her mention of many ways to teach children was another warrant as this was taken to be general public knowledge. Following this warrant, a new claim was made that parents should allow children an opportunity to explain their behaviour (16), supported by suggestions on how to start a conversation between parents and children (17-18). Generally, Aum’s writing from the second sentence to the last word of this paragraph appeared coherent and logically developed. However, overall, this paragraph violated the reader’s expectations because the topic sentence addressed one issue but the rest of the paragraph discussed another issue.

Third paragraph:

In the third paragraph, Aum made another claim principally to acknowledge that hitting could be used to deter unwanted behaviour (19). In effect, she was addressing an opposing view, and the second sentence in this paragraph could serve as a rebuttal (20). She then refuted the idea of smacking by pointing out that there were many other alternatives (21). Note that this was the point she made earlier in the previous paragraph. Her argument at this point became repetitious. This is not necessarily undesirable as revisiting the same point could also help to strengthen one’s argument. Aum ended this paragraph with an example of what parents could do (22).
Aum began her concluding paragraph by making another claim with regard to protecting children from undesirable situations. This first sentence, however, was not clearly expressed, and the reader was left to infer what message Aum wanted to convey. Next, Aum contrasted her claim on forbidding children from doing something wrong with a claim that parents should praise children when they did something right. She further claimed that praising children would give children both negative and positive experiences, in her words, “both sides of the coin”. These second and third claims were clearly based on positive reinforcement in Text A. However, once again, no citation was offered. Having contrasted the negative and positive parental practice and children experiences, Aum substantiated her claim made at the beginning of this paragraph by pointing out why hitting was not effective. She then concluded her writing with two more claims suggesting what children and parents should do. In her second to last sentence, she mentioned children’s right to choose (27). Note that this right had been stated earlier at the beginning of the second paragraph. The position of the first mention and the second mention of children’s right to choose were so far apart that the reader could find it hard to make any logical connection between the two comments. Another interpretation could be that Aum repeated the point made earlier as her essay writing was about to conclude. Aum’s last claim in her final sentence in this paragraph could be linked to the final sentence at the end of the second paragraph. Here, the reader saw Aum’s attempt to recap...
what had been discussed earlier. Overall, Aum’s text was structured much like a conversation with the speaker provided detailed narration of experiential anecdotes. Her use of ‘you’ continued to emphasise the conversational tone as if she was speaking personally to her readers.

5.2.3 Microgenetic findings

Microgenetic findings in respect to Aum show that she used verbalisation to self-regulate in several areas. While reading, she was able to gain regulation over lexical difficulties, negotiate meanings, and compare different ideas across texts. During writing she incorporated several elements from the Toulmin’s model in her writing through object-regulation. Aum did not plan extensively and appeared to write without a comprehensive orientation basis. Aum used prior knowledge to support her argument. And although she also appropriated and expanded on some ideas from the source texts, these ideas were not correctly cited in her writing.

5.2.3.1 Intertextuality

Intertextuality was discerned from Aum’s interactive reading. She regularly monitored and confirmed her understanding by stating the instruction in her own words. She actively sought to overcome lexical difficulty. She also considered the three source texts in light of one another as well as comparing these to her own opinions.

In Excerpt 1, two segments of Aum’s verbalisation are juxtaposed to illustrate how Aum read the instructions (IS). Aum was aware of the time allocated and set a reading goal to scan the task prompt (1-2). This goal served to orient her reading. She did not understand ‘smacking’ (6) and decided to skip this (7). As this word reappeared, she thought it might be significant but decided to tolerate the ambiguity (8-9) (level-two regulation/problem noticed/unsolved). As oriented, she scanned the instructions and acknowledged that there were six tasks (10). She acknowledged that she must write two drafts (44) and not copy (45). She noted the different time allocated for a paragraph and an essay (51), and focused on deciding on Option A or B (52). More importantly, Aum set a goal to work out the meaning of ‘smacking’ (52). Aum demonstrated her understanding of the task prompt by regularly saying “OK” in response to the instructions.
Excerpt 1

Next, in Excerpt 2, Aum asked for assistance from the researcher but was told to work out her vocabulary difficulty by returning to her reading (23-24). She then guessed that smacking was hitting (57). She tested this hypothesis by substituting ‘smack’ with ‘hit’ in Option A (60-61) (level-five regulation/without external assistance). Aum then externalised the meaning of smack, using this in her own words meaningfully and purposefully (64-65). As she negotiated her choice of argument stance, she verbalised to help her imagine what she would do if she had children of her own (66). She gravitated towards smacking as a way to make children obedient (67).

Excerpt 2

what is wrong. Smack. What’s that? Smack again. Is Smacking children is a form of violence and should be made illegal. I think I should ask. Teacher, can I ask what is smack smack?

The researcher replied: Oh try to find the meaning from the text.
Much later on Aum sought to bring ‘smacking’ further under her own regulation. In Excerpt 3 below, Aum understood ‘smack’ and used ‘hit’ interchangeably with ‘smack’ (221-222) (level-five regulation/without external assistance). Still, later, she needed to remind herself of the meaning again (level-five regulation). This showed that as she was progressively developing her confidence in using this new vocabulary item, she relied on verbalisation as a means to reorient herself and to increase her mastery. After this, Aum, again, comfortably used ‘hitting’ in place of ‘smacking’ (362-363).

Excerpt 3

221  *have the different way “different way of punishment not hit”* (put X above ‘hit’) What’s the different way way of punishment not hit?

225  *them.” OK then “Conclusion” “conclusion”* Umm (...) support again that (...) IS → BS“Smacking” IS“What smacking? like hit?”

362  (….) OK need to give the reason and the other way for punish them without hitting. “*However there still have many way for*”
Previously, in Excerpt 2, Aum turned to the researcher rather than trying to work out new vocabulary herself (23-24). But in Excerpt 4, shown next, Aum began to self-regulate during reading and used verbalisation to work out unknown words through self-questioning (83-84, 105-106), drawing on prior knowledge (84-85), rereading (98-99), and guessing (99). She also tolerated the ambiguity (85, 98&118) (level-two regulation/problem unsolved) and monitored her comprehension and her guessing (99).

**Excerpt 4**

As well as being able to overcome some of the vocabulary difficulties, Aum also demonstrated self-regulation as she linked and compared different pieces of information. Evidence of intertextuality is shown in Excerpt 5. Before she finished reading Text A, Aum compared it with option A that she had chosen (92-93) and saw that they were opposite. After she had finished Text A, she reaffirmed that the two were contrasting views (107). Next, she read Text B (not shown here) and thought it agreed with Text A. She then guessed from the title of text C that all three texts were about discipline (130-131). She then read Text C aloud (lines omitted) and concluded that all the source texts agreed with Option B (anti-smacking) (144). Next, she was able to corroborate the main ideas of what she read, checking one against another and able to make a generalisation meaningful to discourse synthesis. This showed her regulation over intertextuality.
5.2.3.2 Task representation

Through verbalisation, Aum attempted to create her task representation and was able to state key points from the task prompt in her own words. In Excerpt 6, Aum had chosen Option A. She then oriented herself by stating that she next had to read the source texts. She recognised that she needed to plan, organise, provide evidence, and revise her writing. She also set clear reading and planning times. Task orientation and conceptual development were evident in this excerpt. This indicated level-five regulation (without external assistance).

Excerpt 6
Following her reading of all three source texts, in Excerpt 7, Aum reconsidered the two options and confirmed she still wanted Option A (151). She came close to generating ideas in response to option B and supporting this with information from Text C (148-149). Here, she was about to make a meaningful link between the human rights of the child and the notion that smacking should be made illegal (148). Unfortunately, this nascent idea was dropped no sooner had it emerged through verbalisation. Aum still decided on Option A. Next she set a clear goal to spend 10 minutes on planning. This goal formed the orienting basis of her writing.

Excerpt 7

Next, Excerpt 8 shows evidence of Aum’s orienting behaviour towards her writing task. She acknowledged the role of source texts as supporting information and the number of source texts available for text mining (157). She considered counterargument at verbal level (158). Having decided on Option A (smacking), Aum reread the sources looking for information she could use as a rebuttal (160-161). Next, Aum demonstrated object-regulated behaviour. She changed to Option B based on the amount of supporting evidence available in the source texts (163-164). She used self-questioning to regulate her thoughts clearly stating that she intended to cover a counterargument. Additionally, there was evidence of verbalisation as a means for self-regulation through abbreviated speech: “what we should do if we not hit them. [We should use reinforcement. If we hit,] they...
will not [understand why they are punished as shown] in the [text] A. They will [be] in danger [because they don’t understand]” (M) (166-167). Aum also used the Toulmin’s model (TM) (169-171). Unfortunately, Aum only read aloud the TM without working out how each element could be applied in her planning.

Excerpt 8

Umm ST text A, B, C support or (read the source texts silently for 9 seconds) How about the opposite side? ST This one not agree with
the smacking. If I agree with smacking so what would be the
opposite side? How do I I cover that? (read ST silently for 11
seconds) OK, (……..) A2 Punishment itself, OK, is actually the least
effective method of discipline. Maybe if I agree that. OK, I think I
choose B. Smacking children is the form of violence and should be
made illegal. ST OK I choose B so need to support my idea and then
the opposite side will be argue that ah sometimes if children not
believe what you say umm they do that again and what we should
do if we not hit them. They will not in the A they will in danger.
(…) OK. (…) Umm. Intro I need to work out (took out the
toulmin’s Model/TM) (……..) TM the main idea to convince the
reader going to support that (…) warrant .. accepted by most
people (…) backing rebuttal OK. OK. I choose B (looked at TM

5.2.3.3 Logic, coherence, and revision

Aum’s logical thinking was evident in how she set goals and oriented herself as she planned her writing. She located appropriate information from the source texts to support her ideas and demonstrated her awareness of textual coherence. She planned logically and coherently. Unfortunately her plan and logical thinking transpired relatively little in her actual writing. It appeared not all aspects of the orientation basis were eventually carried out as action.

In Excerpt 9, Aum drew on her cultural experience to conceptualise the introduction of her brainstorm (176). She used self-questioning and answered this coherently. In Thailand, it is illegal for teachers to hit students but there is no law to protect children from being smacked by their parents. She then planned to mention parents and teachers before talking about the government and introducing the legal aspects (199-200). Next, Aum articulated how she would use Text A (203-204) to support punishment without hitting (203-204) and Text C to object to hitting because children
have rights (197&207). She also tried to work out how to integrate all information smoothly (207-208). Essentially, Aum was thinking of textual coherence. She recognised the need to ensure a smooth flow of various ideas during this stage of planning. This recognition could qualify as a ‘control’ dimension of her planning action. As she had not solved the problem, this indicated level-two regulation (problem noticed/unsolved).

**Excerpt 9**

```
brainstorm/BS) BS//Punish// (...) //W/ The intro legal should
74 comments about punishment BSSmacking children is a form of
75 violence and should be made illegal (...) so maybe I can. (...) Do
76 Thailand have the legal about that? BSNot for parent but for
teacher. //not for parent/ //teacher/ Maybe I intro teacher? BS"The
78 legal in Thailand about teacher cannot hit student" BSAnd then so
this means that ahh (...) or maybe ask about punishment first. Tell
```

(circled ‘rights’) So children also have right. OK. (underlined ‘children do have right’). BS(…) OK the intro I should intro
199 “introduction” //parent// Talk about parent first then to “teacher”
and then to the “government” all “legal” BS(…) OK and then for the
body first body (wrote 1 body) (glanced at the source texts) should
be about the (...) punish. What’s the disadvantage of punishment?
203 “Punishment(1)without” A(…) if they not do from A. (crossed out
‘without’ and wrote ‘if A’) STAnd second ahh is the form BS of that
coming maybe punish by other thing not hit other and then is that
one describe they have right (wrote Ôpunish hit→other and Ô
right). BSOK they have right. So what was that about? What will
link these three together?

**Excerpt 10**

In Excerpt 10, Aum began her first draft (D1). She used self-questioning to decide how to illustrate her ideas of children engaging in dangerous activities. She also used self-instruction to regulate her thinking and stated explicitly what she would like to say. Incidentally, Aum’s examples were based mainly on what she knew about home-based childhood experience and not the source texts. Additionally, there was a few instances of ‘control’ whereby Aum was revising her writing as she wrote (249-252 and 254-256). This online revision appeared to concern grammatical items rather than conceptual
modification. Next, Aum used self-questioning repeatedly to generate and clarify her ideas (273-274). She also self-instructed, telling herself to ‘keep to the right point’ (275-276). This was evidence of control as she attempted to regulate her writing.

Excerpt 11

In Excerpt 11, Aum thought her introduction was far too long and some of it should be in the body paragraphs. This indicated control and level-two regulation (problem noticed). Next, she decided to draw information from the source texts. She mentioned human rights from Text C and was able to generalise this in her own words (300-302). However, Aum only wrote down “This means that parent” and verbalised should not hit their children because they have the right without inscription (301-302). It appeared Aum did not realise she was missing out on an idea that hitting was an illegal act because it violated the human rights of children. As shown in Excerpt 12, Aum eventually deleted ‘This means that parent’ when she came to revise her first draft (476-477).
In the Excerpt 13, Aum demonstrated her awareness of the audience and set a goal to make her writing easy to understand (311). She then looked for specific information about unfair punishment from Text A, effectively carrying out her goal set earlier during brainstorm to use Text A to support her argument. This was an instance of orientation being carried out in actual action. However, after spending quite some time reading Text A (314), Aum was not able to abstract any idea from it and turned to her past experience (316).

Excerpt 13

their children” (looked at her writing for 5 seconds) I should give the example so it clearly understand (…) What about (…) D1 “Asking the explanation from children may lead parent to misunderstand with their children” ST Where is the (…) unfair?

A(…..) D1 “For example” What is the example for misunderstood for children? (……..) Umm (fifteen seconds) How about what? do I have something in the past that my mum misunderstood for me?
Excerpt 14

Excerpt 14 shows another instance of self-regulatory self-questioning and self-instruction. Here, Aum recognised that essential information must be included in the conclusion. Her verbalisation helped her refocus and she returned to the introduction to recapitulate her points.

In Excerpt 15, Aum noticed that she had produced a very long sentence and wondered how it should be broken down later, an instance of orientation towards future revision. Despite this realisation, Aum added another clause, rendering this 55-word long sentence. This indicated level-two regulation (problem noticed/unsolved).

Excerpt 15

Also in Excerpt 15, Aum demonstrated dialogic thinking; she anticipated how imaginary children in her text would respond to her writing (378). This was a new behaviour for Aum who reportedly used to write as many words on paper as possible and hardly slowed down to think how others might react to her writing.

Excerpt 16

Also in Excerpt 15, Aum demonstrated dialogic thinking; she anticipated how imaginary children in her text would respond to her writing (378). This was a new behaviour for Aum who reportedly used to write as many words on paper as possible and hardly slowed down to think how others might react to her writing.
In Excerpt 16, Aum used self-questioning (466) and rereading her draft to clarify why smacking made children aggressive. She subsequently decided that lack of understanding of why they were punished caused aggression in children (468).

Next, in Excerpt 17, Aum had just finished her first draft (D1). She set goals for rewriting and correcting grammar (528). She was also aware of the time constraint (529) and set an explicit goal of finishing within 20 minutes (530). As oriented, Aum revised and attended to modal verbs (545).

**Excerpt 17**

```
right// of doing with some dangerous thing.” OK. OK I think I
should write down again and then correct the grammar (pulled out
a new blank sheet) Do I have time? (looked at her watch) I have
about 20 minutes. OK I make sure. D2 (copied the first sentence

...```

```
D1→D2//Some parent// (grabbed D1) D1 Do I have to use this one?
“Some parent try to explain the thing that may cause danger” (…)
OK. D2 “Some parent” Can I put some parent do? (…) Some parent
(…) should? (.) Would? Use? Should? (…..) “may” “may punish
their children by hitting.” (copied from her 1st draft) “However,
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**Excerpt 18**

Excerpt 18 highlights changes made as Aum wrote her drafts. In her first draft, Aum presented hitting as a means to make children obedient but not an effective way to prevent children from harm (451-457). In the second draft, she made lexical changes from ‘to participate’ to ‘to give the opinion’ and from ‘should’ to ‘choose’ (599), and changed a coordinating conjunction ‘but’ to ‘and’ (601). She then set a goal to check her writing (602).
‘hit—them’ and replaced with ‘hitting’) “However hitting is not effective way (deleted ‘punish their children’) to prevent their children (.) from hurt.” “However hit hitting is not the effective...

//Parent should give them all “chance to participate” (looked at the 1st draft for 5 seconds then deleted ‘participate’) D2“to give the opinion” “the opinion regarding their dangerous situation”...

D2(...) D2“Children should have the right to should” (deleted ‘should’ and replaced with ‘choose’) “what they want to do” //parent have the rig to guide them but not/ (deleted ‘the rig’)
D2(10 seconds) (deleted ‘them but—not’) //and// “give the information to them.” OK. Check. (tidied up her paper and pulled

information to them.” OK. Check. (tidied up her paper and pulled out the coherence SCOBA) OK. C5Does this paragraph have a topic sentence? D2OK where is the topic sentence? D2“Taking care of children is the difficult job for parents. Most of the activities that children do are bringing them to danger. For example children may see their mother using knife for preparing lunch. When their mother is not at home, they may playing with a knife and get hurt. All parent do not want their children to get hurt. Some parent may punish their children by hitting. However, parent do not have the right to hit their children.” (.) Umm this may lead the reader to understand regarding about taking care of children. D2“However, hurt.” OK “effective way.” (looked at the SCOBA) C5Is the topic sentence well support? OK. D2About the examples support the activity and another is come back home. OK because some parent will punish by hitting but it’s not the good way. OK C5Are the sentence logically connected? Logically. D2Taking care and then
In Excerpt 19, Aum checked her essay as oriented. She used the coherence SCOBA (CS). She read the first question on the CS (603) and her introduction aloud (604-611). Here, Aum used the CS meaningfully. She did not merely identify the topic sentence. In fact, she was thinking of the audience and the examples she had used to illustrate her main idea (611-612). She envisaged the supporting information would assist readers in understanding her topic sentence at the beginning of the paragraph. Here, Aum was using the SCOBA, again, at the material level. This indicated level-four regulation (problem solved with external help). Aum checked her essay according to questions1, 2 and 3 on the SCOBA (633&635), and found her writing acceptable. Next, Aum’s attention turned to intra-sentential coherence and revised a pronoun reference (641). Guided by question 4 on the SCOBA, she checked whether her writing read smoothly. Here, she decided that there was confusion over ‘them’ and remedied this by replacing it with ‘children’ (644). Aum then read her second paragraph aloud and thought she had good supporting information. Then, Aum’s use of the SCOBA came to a sudden stop despite having only gone through four out of six questions listed.

Excerpt 20

...
In this final excerpt, Aum checked her writing using the Toulmin’s model, indicating object-regulated monitoring. She was reasonably happy with her work and thought she had included all but one elements from the Toulmin’s (no qualifiers).

Overall, Aum’s verbalisation revealed emergent self-regulation which was not only evident in the meaning negotiating processes she engaged in but also in her awareness, recognition and focus made through these processes. Having been assisted to attend to explicit roles of text, reader and writer, Aum began to step into her new role of meaning generator, negotiating her own understanding while reading and considering the view of her audience during writing. Aum no longer agreed with or believed in everything she read.

5.2.4 Developmental changes

Prior to the intervention, Aum did not understand the writing process and used to write as she progressed through task, adding one idea onto another with virtually no prior planning. Writing, following reading, meant summarising different texts from different authors: “Before training, reading the work of many people meant writing a summary of each piece of work. After training, writing involves identifying concepts that interest me and when I read articles by different authors on the same issues, various viewpoints will be processed in terms of their similarities and differences” (M/RT). This suggests that Aum’s reading and writing stance had begun to transform. Also, Aum no longer thought all texts were true or well-written or coherent: “Why I’m not understand. I will have two choice because of my background or because of my English or maybe because of this text” (I1726-1727). While her respect for texts remained, it no longer prevented her from creating her own voice. Previously, Aum had described her writing as “the recorder sentence order” (I200), agreeing and recording what she believed to be factual information from her reading. Following the intervention, she appeared to have succeeded in constructing a sense of readership and authorship and knew she did not have to agree with everything: “because sometime when we read the article, some article different from what we think” (I1664-1665). Aum commented on the use of supporting sentences to substantiate her argument: If the writer’s opinions “agree with my idea so I can use to support” (I1658), and “if it not so I use that to rebuttal” (I1660). She reported her writing improvement through “using the Toulmin to guide my writing and then use the SCOBA for checking” (I237-238).
Aum also applied what she learned about writing in her reading. Aum recalled, “when I read the article I sometime I lost my way because when I read them to support with past research, a lot of past research to support right?” (I1607-1608). Now she began to read from a writer’s perspective and was able to differentiate claims, grounds, backings etc.: “I use the writing technique to understand the reading also” (I1187), “I think after I know that most of the text that I read they just follow the like Toulmin” (I1194-1195), and “sometimes we will loss the main idea because they give too much examples” (I1201-1202), “but I need to stick that what is the main idea then I will understand that those sentence is in such details” (I1204-1204).

Aum reflected on her verbalisation: “self-questioning, self-verbalisation so it make me to keep concentrate on the reading and then keep understand the actually the main idea” (I1183-1184). Aum generated her own questions because she needed “to understand first what is the main idea” (I673) and “so I list the questions” (I677). Aum also learned to monitor her comprehension and became more tolerant of unknown words. If she understood the gist of the text she did not need to know every word anymore: “Just focus on the main idea of the paragraph even though in the paragraph I have the vocabulary that I didn’t know and so if I am still understand what the paragraph like to say, just skip that” (I185-189). Aum’s ability to overcome lexical difficulty was in fact an important aspect of her microgenetic development during reading. Previously, Aum used to think she needed to know every word she read and would stop to consult a dictionary each time she came across an unknown word. Also, Aum used her imagination and pretended to have a conversation with her friend: “so if I read this article and then I just put it down and then tell my friend what it’s about” (I1580-1581) and “I tell myself but I pretend that I tell my friend” (I1583). Verbalisation strategy had taught her to develop dialogic thinking while reading and writing, having a conversation with herself before critiquing on paper.

The intervention also helped Aum learn how to view texts critically and understand the reading-writing relationship and discourse synthesis: “Reading and writing are related. From reading we know of various viewpoints and gather information. Following this, we can incorporate what we already know with the new knowledge from the reading. Through the process of our thinking we analyse this and use it to create a new writing” (M/RT). Here, Aum’s articulation served as definition data (Negueruela, 2003), reflecting her conceptual knowledge.
Aum also developed her theoretical understanding of citation and plagiarism in academic writing: “writing using other people’s idea must have a reference showing that we took these ideas from someone else” and “reference to other people’s ideas must cite their names and sources of information. Using someone else’s ideas without acknowledging the source constitutes stealing. It is wrong” (M/RT).

Another area of Aum’s development was goal setting. Initially, Aum’s PhD reading and writing goals were set by her professors. Asked if she always followed teacher’s instruction at school, she confirmed that she always did as instructed and most goals were set by the teacher or course requirements. Following the intervention, Aum understood goal setting as important strategy: “Strategy is the way we use to overcome what we would like to achieve” and “I need to understand first what I would like to get from that learning” (US). She described the regulatory function of goal setting: “When I set the goals in my learning, I will know what I should do for my next move. I will not concentrate or understand in every details of the thing that I’m learning but I will try to understand the main idea and think that is it enough to reach my goals” (US). Furthermore, Aum learned to monitor her goals: “when I’m not doing so well as well as I expect, I need to go back and check what is my goal” (I1057-1058) and “I need to recall what is what is something wrong in between or in the process” (I1060-1061).

5.3 Case study III: Chubby

5.3.1 Chubby as a reader and writer of English

Chubby’s reading habit had been fostered through childhood reading within her family. As described above (p. 74), such a practice is rare in Thailand. Prior to the intervention, Chubby regarded herself as a slow reader and poor writer: “Before I think reading and writing is so difficult” (I414) and “I don’t know, like I don’t like [academic] reading” (I417), “so I read quite slow” (I420). She also thought she must understand every word she read within the time given so she aimed to “be on time and understand all of the text” (I612). Chubby reported using limited reading strategies: “I don’t know how to skim and scan. I can only read ahead and ignore or try to guess the words that I don’t know sometimes” (PQ4). Reading-to-write, for Chubby, meant “I read it and I summarise it in my brain” (I159) and “rewrite it it’s my with my words and stuff” (I163). Her past learning did not include extracting information from multiple texts or including in-text citation in her writing. Chubby saw reading and writing as “two different concepts”
Nevertheless, she thought “reading and writing are similar” (I482), “like they have main idea” (I485), and “support information” (I487). She felt they were somewhat linked: “I can feel but I don’t know how to explain it. I don’t know exactly what it is” (I497).

Regarding her writing difficulties, Chubby wrote about lack of purpose: “Sometimes, I don’t have a clear reason for my writing so it makes me confuse and lost from my point” and “maybe the reason for this problem is that I didn’t know how to set goals for my writing or what kind of goals should I set” (WD). Chubby lacked goal-setting experience. Most of her tasks and goals were set by the teacher. Her writing goal, for instance, was to complete the task within the time limit: “The purpose of the task is to finish” (I1179). Chubby saw writing as a product to submit to the teacher: “If the teacher gives you something to do, you have to finish it” (I1186-1187). Asked whether she ever viewed writing as a means to learn a new concept, she replied, “never” and “if we concentrate on the process we will not be on time” (I1215-1217).

Chubby found generating content difficult: “I have a problem with getting started and getting ideas because sometimes I don’t know where to start or what to talk about” (WD). She reported her inability to write clearly: “I always confuse myself like when I say things and then like loop” (I432-433), and “I have a problem in writing or explaining [sic] things. For example, I don’t know how to link my idea together and write them down” (PQ4).

Also, Chubby worried about her lack of vocabulary knowledge: “I don’t know how to write in a formal way because I know very little vocabulary. I don’t remember all the synonyms of vocabulary” (PQ4). She wrote about her poor spelling: “I can’t spell. Maybe because I used to spoken language” (WD). She normally wrote from memory, using spoken/informal language: “I like to write thing in informal way” (I975), “because I used to speaking way more” (I977).

5.3.2 Essay argument structure

Introductory paragraph:

It is normal for children to be into everything but how can you stop them from the cause of the trouble (1. Claim). Smacking is one way of the answer (2. Claim).
At first glance, it appears that Chubby began her essay with a claim from her own knowledge that children were curious and could get themselves into difficult situations. Her first sentence in this introductory paragraph was, according to her verbalisation, derived from Chubby’s interpretation of Text B which states that children are mobile and get into everything (1). Having ended her claim with a question, Chubby then offered a solution that smacking could take care of the problem. This appears as another claim (2).

In her introduction, Chubby succeeded in attracting the reader’s attention to problematic children behaviour. To a certain extent, the introduction served to provide background information on the issue of child discipline. However, the introduction could potentially mislead the reader in that it clearly presented smacking as if this was a desirable solution. In choosing to begin her essay this way, Chubby risked drawing the reader’s attention to the pro-smacking argument. Overall, this introduction, while brief and interesting, did not contain Chubby’s statement of position. In fact, it promoted the opposite.

**Second paragraph:**

> Sometimes parents like to punish their kids by hitting because they think it might scare them from doing it again (3. Claim). But does it fare for the children (4. Claim)? There has been a report about basic rights of human being (5. Ground). This apply to everyone include children (Durrant, 2007) (6. Ground). Even adult can make a mistake so as children (7. Warrant). Nobody wants to be hit when they did something wrong (8. Warrant).

In her second paragraph, Chubby made another claim expressing her understanding that parents might opt for smacking as this would deter unwanted behaviour in future (3). Next, Chubby posed a question drawing the reader’s attention to whether smacking was justifiably fair (4). She did not answer this question directly but proceeded to provide some evidence drawn from text C to indicate her objection to smacking (5&6). Essentially, this was the reader’s first glimpse of Chubby’s argumentative stance. Despite citing a credible source correctly, Chubby had not yet explicitly stated her position. Her anti-smacking stance required the reader to make a U-turn in their understanding.
The last two sentences in this paragraph drew on common assumptions. While both of these warrants (7&8) seemed generally acceptable, they were not directly linked to the preceding sentence. The reader was left wondering what these warrants had to do with human rights.

Third paragraph:

Further more, Clark L says that “Punishment in the form of hitting is not recommended at all because it communicates the message that it’s all right to be aggressive and hit someone if you don’t like what they are doing” (Clark, 1994) (9. Ground). That’s why punishment by smacking is not a good way to teach your child (10. Claim).

In this paragraph, Chubby used the source text effectively. Her verbatim quote from Text B was cited correctly (9), and she added a comment which was developed logically from the excerpt (10).

Fourth paragraph:

Most effective method of punishment is to making a point to let the child know that you’ve noticed efforts towards good behavior. (NA, ND) (11. Ground) Give them reasons why they should not do it but if they don’t listen, just let them learn by themself and you watch them (12. Claim).

Following on from her message that smacking was not effective (10), Chubby presented her reader with an alternative (11). This sentence was clearly based on positive reinforcement from Text A and was taken to be supporting data for her anti-smacking thesis (11). Here, Chubby cited her source correctly. The second sentence in this paragraph (12), however, focused on non-desirable behaviour as oppose to positive behaviour in the first sentence and, therefore, did not add to the logical flow of information.

Conclusion:

“That’s why the smacking punishment should be made illegal (13. Claim). Nobody wants to be hurt when they made a mistake.” (14. Warrant).
Chubby concluded her essay by stating her claim (13). Note that the sentence echoed option B in the instruction prompt. In this final section of her essay, Chubby finally spelled out her position. This indicated that she had adopted an inductive approach to argumentation. Finally, Chubby’s attempt to engage her reader in a debatable conversation was evident in the use of inverted commas to signify that she was speaking directly to the audience (14).

5.3.3 Microgenetic findings

Microgenetic findings show that Chubby demonstrated self-regulation in all three aspects of discourse synthesis. Her verbalisation data provided evidence that she considered intertextuality, created meaningful task representation, and developed her argument through logical thinking. Chubby planned extensively and created a meaningful task representation with a strong orientation basis. She also highlighted, circled, bracketed, boxed up and underlined key information during reading and writing.

5.3.3.1 Intertextuality

Chubby’s regulation regarding intertextuality was demonstrated through her purposeful text-mining guided by the Toulmin’s model, her effective integration of source information to present her ideas coherently, and her comparison of key ideas among the source texts against one another. Overall, Chubby read critically, used source information constructively and cited the sources correctly, with only a few minor oversights.

Excerpt 1 provides evidence that Chubby approached the source texts in a strategic manner. She read all three titles (52-53) before reading each text individually. And as she came across an unknown word ‘discipline’, she set a goal to read aloud to help with her comprehension (55).

Excerpt 1

Having oriented herself with a clear goal to read aloud, Chubby carried out the action. In Excerpt 2 below, several instances of self-regulation can be discerned. As she
read, Chubby monitored her performance and realised she had not set any specific reading goals. She stopped reading in the middle of her sentence, questioned her current action and instructed herself to set goals before going any further (62). Here, Chubby recognised the problem and solved it effectively and immediately (level-five regulation). She set a goal to understand each text (64) and translated this goal into action to identify and underline main ideas, and assessed her goals with “right, yeah” (65-66).

Excerpt 2 also shows Chubby working methodically. She used 1 and 2 to indicate the degree of effectiveness of the two types of discipline (punishment and reinforcement) (69-71). She assigned 1 to punishment (less effective) and 2 to reinforcement (more effective) (M). Next, Chubby used self-questioning to regulate her reading while working out the main idea of Text A (80) and wrote a sentence (81-82) that synthesised several idea units (level-five regulation/without external assistance). Chubby linked reinforcement to the notion of discipline, considered the effectiveness of punishment and reinforcement, compared these two methods, and abstracted from Text A that punishment was less desirable whereas positive reinforcement was recommended.

Excerpt 2
Following this, Chubby started Text B, but was unable to understand the first paragraph fully due to vocabulary difficulty. Chubby did not know the meaning of ‘a dangling table cloth’ and decided to ignore this and continued with the second paragraph (level-two regulation/problem noticed/unsolved).

In Excerpt 3 below, a self-generated question “Why?” (93) aided Chubby’s understanding and prevented possible comprehension breakdown. The second sentence in this paragraph justified why hitting was not recommended. Chubby was able to build a causal link between the effect ‘not recommended’ (91) and the cause ‘(because) it communicates...’ (93) (level-five regulation/without external assistance), but she became confused with the following sentence (95-96).

Her confusion had to do with intertextual links she made. Chubby had built her understanding of punishment as an inappropriate form of discipline earlier in Text A and she had also compared punishment to reinforcement. Now Text B said punishment was not discipline and Chubby could not explain this inconsistency. At this point, she instructed herself to reread (96) but failed to understand that punishment followed unsuccessful discipline.

Chubby’s frustration was evident in her successive self-questioning (101-103) (level-two regulation/problem noticed/unsolved). She then consulted the title (102) but unable to link it with paragraph one despite silent rereading (103). Having dismissed this paragraph earlier, Chubby did not grasp the idea that reorganising the environment could prevent undesirable behaviour. Nevertheless, she kept up with her reading goal to identify the main idea and focused on punishment and hitting (104-105).

Excerpt 3

91 B2Punishment in the form of hitting is not recommended at all.
92 Umm hitting not recommended at all. (bracketed and underlined
93 ‘hitting’) Why? B2It communicates the message that it’s all right to
94 be aggressive and hit someone if you don’t like what they are
doing. Remember that punishment is not discipline but a sign that
discipline has been unsuccessful. What? Gonna read it again.

...
Excerpt 4 shows Chubby was surprised that discipline could be positive. This is because Chubby had constructed her understanding of this word, taken to carry a negative connotation based on hitting and punishment (M). Despite her initial wrong impression, Chubby had demonstrated a reading stance desirable for discourse synthesis. As she read multiple texts, she recalled and integrated various pieces of information to form a semantic network. That is, Chubby was linking ‘discipline’ with what she had learned from Text A and B. Furthermore, having read Text C, she checked the content in light of the title and noticed that they did not cohere (118-119). After this, Chubby acknowledged that she still could not fully comprehend the word ‘discipline’ (119-120), indicating her self-regulatory comprehension monitoring (level-two/problem noticed/unsolved). Next, she checked the time (121) before rereading Text C. Chubby noticed the repetition of children’s rights and used this salient information to form her main idea (127) (level-five regulation). Being aware of her incomplete understanding of ‘discipline’, she instructed herself to reread Text A. Self-regulation was again evident in that she followed up the problem subsequent to acknowledging it. Not only did she monitor her comprehension but she also evaluated the situation and determined the next course of action relating to multiple goals (reading for main ideas, finishing her task in time, and rereading).

**Excerpt 4**

106 What is it? Positive discipline. Oh! Discipline can be positive.
107 Also? What is and how to do it? All people have basic rights...

118 So? What is the positive discipline? What is it? What it is and how to do it? Positive discipline. Discipline. I don’t quite get this word. Positive discipline. "Text C:” maybe about "Positive discipline” Umm (put her pen down) How about time?
5.3.3.2 Task representation

Chubby’s clear task representation was evident in her planning. Chubby set clear goals and was oriented accordingly. Her self-regulation was shown by her direct attention to selecting specific supporting evidence for her ideas. Also, she began text mining by highlighting text portions to be used at a later stage of her writing and labelling each section of her comprehensive brainstorm with elements drawn from the Toulmin’s model. Each element was clearly boxed up and followed by supporting information from the source texts.

Before presenting Chubby’s microgenetic findings regarding regulation of task representation, attention is drawn to an instance of conscious awareness at the level of action, unique to Chubby’s case.

Excerpt 5

Excerpt 5 shows Chubby skim-reading the instruction sheet (IS). She mispronounced ‘smack’ as ‘smash’ (6-7) without slowing down or realising her error. This showed regulation level one (problem unnoticed). After this, she continued until finished the task prompt. As she read, Chubby regularly nodded and said “yeah”, “yes”, and “OK” to confirm her understanding. Although Chubby mispronounced ‘smack’ as ‘smash’, she understood the meaning of ‘smacking’ from ‘smacking or hitting’ in the instructions and chose Option B (anti-smacking) as soon as she finished (46). Chubby objected to Option A, based on her preference against being punished. At this point, she set a goal to choose her argument stance. Her statement (48) served to orient her action, carried out immediately afterward. She chose Option B and acknowledged that she could change her mind later (50).
As Chubby verbalised and copied Option B onto her brainstorm (BS), she suddenly noticed her mispronunciation of ‘smack’ (48-49). As she started to write the word, she saw from the spelling and related the grapheme ‘ck’ to the phoneme /c/ and saw that it was ‘smacking’ and not ‘smashing’. Having previously seen the word and mispronounced it six times in this excerpt, suddenly Chubby was able to monitor and correct her pronunciation. Note that she did not have to rehearse the sound of ‘ck’. Nor did she spell out the word letter-by-letter. Therefore, Chubby had progressed from level-one (problem unnoticed) to level-five regulation (problem solved without external help).

After this, Chubby read the source texts (as described in section 4.3.4.1). Then, she spent considerable time planning. Notable features of Chubby’s clear task representation were setting clear reading and writing goals, comprehensive planning which included audience awareness and counterarguments, and logical thinking which informed her planning decisions as evident in her brainstorm shown in the following excerpts.

In Excerpt 6, Chubby was ready to begin her brainstorm (BS). She verbalised her goals to “get the main idea” and to organise her writing (138-139) before restating her chosen topic and correcting her mispronunciation (140). The two goals served to orient her actions. Chubby relied on the Toulmin’s Model (TM) to organise her brainstorm. Although the use of the TM indicated object-regulation, this highlighted Chubby’s understanding of argumentative writing rhetoric. Also Chubby’s self-questioning and self-instruction were strategic. She was able to think critically about her chosen topic and to rationalise her thoughts (142-147). She identified supporting information from Text B (148) and included her audience in her planning (153-157). Chubby focused on the government because these were the people who passed the law, and, therefore, more appropriate for the anti-smacking stance she had opted for (M).
Excerpt 6

In Excerpt 7, Chubby continued to use most of the TM key elements, except qualifiers. The elements were boxed up so they stood out and were accompanied by source information which was methodically organised with supporting evidence from text C clearly stated (160-164). Next, she verbalised in Thai to conceptualise counterargument (166). Abstracting the idea that ‘punishment is the least effective method of discipline’ (Text A), Chubby held the view that smacking did not help children learn (170). She envisaged an objection that, without smacking, children would not learn (171). Here, Chubby was able to address an opposing viewpoint mentally and verbally, indicating her good understanding of argument rhetoric and level-five regulation.
In Excerpt 8, Chubby verbalised almost exclusively in Thai ("oo……oo" indicated translation by the researcher). She continued to envisage and rationalise how to form a rebuttal and how to counteract this. She acknowledged that smacking induced fear and might deter bad behaviour. Chubby proposed using a remedial discussion (184) instead
of smacking but then wondered what to do if the discussion did not work (186) and came up with a solution that children must be given reasons (191).

Her verbalisation appeared logical and productive. Although she was deeply engaged in dialogic thinking, Chubby was regulated enough not to forget the time constraint (192). In addition, Chubby made extensive use of conditional clauses, indicating she was able to envisage different scenarios mentally and verbally and organise her thoughts hierarchically (level-five regulation/without external assistance).

**Excerpt 9**

```
245 make it in a paragraph. The first one first paragraph introduction.
246 What should I say in my introduct introduction? Introduction I’m
gonna say BS…What can be my introduction? BS2 I’m gonna say
248 about. What should I say? “should be made illegal” so intro
249 introduction should be… “smacking should be made illegal”
250 Why?.. I’m gonna tell about discipline... Umm no I’m not. ST…..
251 BS2 Hmm what should I say about the introduction? STIntroduction
252 BS2 Hmm Umm. How to lead them to my body my writing body? อื้

...```

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256 must it be made illegal? Illegal? ST Ohhh how to start it? Made
257 illegal. Ohh introduction. I can’t think of any introduction. What
258 should I say? What should I say in my introduction? Should made
259 illegal ง era must be made illegal, mustn’t it? Because ง.
260 (got a new sheet) ง era So difficult ง Umm ……OK so if I can’t
261 think up my introduction then let’s let’s move on to the next to the
262 body first then I come back later for my introduction. Good. Good.
```

In Excerpt 9, Chubby moved on to her introduction, and used self-questioning and self-instruction extensively for orienting purposes. She set goals to include her thesis statement and to mention discipline (250). She articulated her understanding that the introduction should lead [the reader] to her essay (252). She emphasised her anti-smacking stance that smacking was illegal and intended to provide reason for this (259). Despite this comprehensive orientation, Chubby struggled to translate her thoughts into words and acknowledged that the task was difficult. Following several moments of reflection (260), she decided to start with the essay and leave the introduction for the time being. She was pleased with this decision (262), indicating her on-line monitoring. Here,
although she demonstrated level-two regulation (problem noticed but unsolved), Chubby also appeared self-regulated in deciding not to doggedly pursue the introduction and to shift her attention onto a different task which was just as important.

Excerpt 10

Having left the introduction to work on her essay, much later on Chubby returned to this task and was able to use verbalisation to help her work on it productively. As shown in Excerpt 10, Chubby relied on the first and second sentences of Text B for her first introductory sentence (422-426). She reread the first paragraph of Text B but failed to finish it (422-425). She generated ideas through self-questioning (432-436) and her reading aloud what had been written (italicised, underlined in quotation marks) appeared as another key strategy. Chubby also monitored her word choice as she wrote and decided to substitute ‘children’ with ‘kids’. Next, she carried out online-revision. She made sure that the pronoun ‘it’ (441) referred to ‘hitting’, deleted ‘that’ (445), and worked on a suitable proposition (446-449).

---

421 Introduction. B ...... D2“It is normal for children” ...... “It is normal for children” B → D2 B ...... B1 appropriate to rearrange the environment to avoid trouble occurring first place. It may be impossible for your newly-standing child to ignore temptation of the. D2“It is normal for children to be” B1 → D2 “into everything” B1 ↔ D2 “It is normal for children to be into everything” D2 .... “but how can” “how how can” “you stop them” B ...... D2“but how can you stop them” B1 ↔ D2 “from the cause [pronounced ‘case’] of trouble.” D2(10 seconds) “Smacking is one way of” “It is normal for children to be into everything but how can you stop them for the cause [case] of trouble. Smacking is one way of.” .... “Smacking is one way of” of วัด ความ what of วัด เด็กใช้พื้นที่ ความ of what? And what is it used for? “Smacking is one way of” of how to stop them how to stop them “but how can you stop them from. Smacking is one way of the answer.” “Sometimes” D1 → D2 “Sometimes parents”.... /like to/ “punish their children” (started the word ‘children’ with ‘ch’il’ but delete ‘ี ชิล’) Umm their oh I have used children. ใช้เด็ก ที่มีอยู่แล้ว ใช้เด็ก ที่มีอยู่แล้
Collectively, Excerpts 9 and 10 show qualitative improvement in Chubby’s behaviour from level-two (unable to write) to level-five regulation (introduction completed and checked).

5.3.3.3 Logic, coherence, and revision

This section highlights logical thinking during multiple-draft writing and revision. It was evident that Chubby had appropriated the concepts of discourse synthesis and argument structure. As shown below, Chubby demonstrated emergent regulation in identifying the parts of an argument based on the Toulmin’s model. She offered the rationale for including her reasons. She set clear goals and conducted on-going monitoring and evaluation of her decisions and actions. Additionally, revision was done throughout the task as opposed to simply being done once the writing was completed.

Excerpt 11 shows Chubby incorporated the source texts and the TM in her thinking. This indicates that, guided by the TM, she also based her argument on the information provided and not mainly her own background knowledge.

Excerpt 11
Chubby reread the source texts purposefully, looking for supporting information on why smacking should be illegal. Initially, she thought of Text A, but then decided on Text B. Her sentence ‘Hitting is not good for punishment’ (149) was paraphrased from ‘Punishment in the form of hitting is not recommended at all’ (Text B, ¶2). Here, Chubby was able to abstract the idea that hitting was not recommended because it was not good for punishment, and linked ‘illegal’ to ‘violence’ (151). She used self-questioning to rationalise this.

**Excerpt 12**

In Excerpt 12, Chubby continued to consult the TM and sought to form a logical argument. She started on a rebuttal (196) but then decided to consider her backing (197). She wrote this on a new sheet, before suddenly realising she had not quite finished with the rebuttal. Confused, Chubby decided to start afresh (200). However, she mistakenly labelled her claim as ground and ground as warrant. This mistake was undetected (level-one regulation) and Chubby concentrated on selecting supporting information from Text A (207). She then found that the information was not suitable (203-205). Next, she was mindful of the time and acknowledged that she lacked clarity in her thinking (207). Even without noticing her mislabelling, Chubby became aware that her work was not going well (207). This awareness denoted an emergent control mechanism which was not fully regulated. Nonetheless, it served to caution Chubby and led to her remedial action as shown next.
Excerpt 13

In Excerpt 13, Chubby used verbalisation to generate content for her warrant, but then she went back to work on her ground. As she reread her brainstorm, Chubby noticed that she had mislabelled the key elements (level-two regulation/problem noticed/unsolved). She consulted the TM (213) (object-regulation) before correcting her mistake. She then used self-questioning to double-check her work and was able to label each TM element in her writing correctly. Essentially, Excerpts 12 and 13 provide evidence of microgenetic development from level-one (problem unnoticed) to level-two (problem noticed/unsolved) and subsequently level-three (problem solved with external assistance).

Excerpt 14

In Excerpt 14, Chubby did not know the English word for ‘advise’ (221) but managed to use ‘lead them to the right way’ as a close approximation (224). She integrated this into her train of thought, evaluating her proposition that giving advice was more appropriate than hitting or controlling through fear (227). Next, she continued to apply the Toulmin’s model and thought of a rebuttal. Chubby strategically applied verbalisation to regulate her thinking, imagining herself as a parent and decided that the best way to deal with this was to let the children learn the hard way. Overall, Chubby used verbalisation effectively. Each question was meaningful and led to further rational action. This denoted level-five regulation.
Excerpt 15 provides evidence of Chubby’s logical thinking and citation practice. First, Chubby challenged whether hitting worked (292). She then introduced an alternative, quoting verbatim from Text A (294). Chubby cited this appropriately and was able to abstract an idea from the quote and commented on this in her own words (300-302) (level-five regulation). She then provided a backing for her comment, pointing out that hitting was disliked by everybody (303). Next, Chubby linked her backing to human
rights from text C, but failed to acknowledge the source. Chubby did not appear to notice that anything was amiss (level-one regulation). And while her reasoning behaviour was based on the source texts, Chubby’s textual borrowing showed varying degrees of regulation. She meticulously cited one source (297) but neglected to give credit to the other (304). This indicated her textual borrowing skills were still developing and had not fully been regulated.

In Excerpt 16, Chubby identified a key idea in Text B, quoted and acknowledged the source accordingly (level-five regulation). Next, she continued to search for more useful information but struggled to understand another key concept (315-317). She reread and guessed that ‘discipline’ might mean ‘behaviour’ (320). Unsure of her understanding, she abandoned this text segment (level-two regulation/problem noticed/unsolved). She then moved on to text C and reread her writing relating to human rights. She used self-questioning to help generate more ideas. She also revisited her second brainstorm and reflected on this for several seconds. She monitored her performance and articulated that her ideas for backing were still forming and not yet refined (327), indicating the control mechanism was at work. Next, she drew information from text C, made minor changes and copied most of the words without acknowledging the source (343-347). She did not appear to notice this oversight (level-one regulation).

Excerpt 16
In Excerpt 17, Chubby addressed the counterargument that, without hitting, children might not obey their parents. She used self-questioning and rereading aloud to help her focus. She repeated ‘they don’t know why’ six times in total before concluding her sentence with ‘the parent said so’ (365). Chubby was satisfied with how she had put forward the rebuttal. Note that at this point, Chubby did not consult the Toulmin’s model. Therefore, her behaviour was not object-regulated. On the contrary, Chubby demonstrated that she was able to focus on the rebuttal as a concept at verbal and mental levels (level-five regulation/without external regulation). Additionally, Chubby remained mindful of the time constraint. Also, as she skimmed through her brainstorm and first draft, she was able to detect that she had not cited Text C (as previously shown in Excerpt 16) and remedied the situation accordingly. Therefore, Chubby had progressed from regulation level-one to level-five regulation.
Next, in Excerpt 18, Chubby checked her first draft for the topic sentences. Again, she circled ‘smacking’ and was able to focus on this word and pronounced it correctly. Chubby repeatedly asked “What is smacking?” (392&394-395) as this was the key concept. Chubby worked systematically, circled and bracketed the topic sentence of each paragraph, and used verbalisation meaningfully as she checked for key ideas, indicating she had appropriated the concept of ‘topic sentence’ taught during the intervention.
In Excerpt 19, Chubby’s verbalisation continued to be purposeful as she made several changes to her first draft. She identified and highlighted the topic sentences and supporting information as well as reorganising the paragraphs and reflecting on the draft for almost half a minute (419).

In Excerpt 20, Chubby copied from her first draft, quoting from text C. She then reflected on her second draft and double-checked the source texts for several moments for correct citation. And although Chubby’s behaviour appeared object-regulated, her self-regulation featured strongly here as she deliberately consulted not only the first draft but also the source text. Also, Chubby substantially changed the organisation of her text. In her first draft, she had mentioned a report on positive reinforcement (396-397, Excerpt 18), citing Text A. In this second draft, she introduced human rights in place of positive reinforcement, and deleted a segment on children being small and dependent (344-347,
Excerpt 16). She also collapsed a segment ‘everybody could make a mistake’ (411-413, Excerpt 19) and used this in lines 458-459, shown below. Additionally, there was evidence of immediate control following execution as Chubby often reread her text immediately after inscription. Furthermore, once she finished this paragraph, she instructed herself to reread the whole paragraph all over again (464).

Excerpt 20

451 does it fare// .... //for the children// .. “There has been” D1→D2→ST
452 D1→D2→a report about basic right of human being.” D2(10 seconds)
453 “This apply to everyone include children” D2(7 seconds) C(18 seconds) (looked up) C→D2→”Durrant” What should I put here? T (98)
455 "Year two thousand and seven/00 //2007/ “children” “There
456 has been a report about basic rights of human being. This apply to
457 everyone include children.” D1→D2→”Even adult can make a
458 mistake” D2(7 seconds) “Even adult can make a mistake.” D2(10
459 seconds) “so as children” “so as” “There has been a report about
460 basic right of human being. This apply to everyone include
461 children. Even adult can make a mistake so as children” ..
462 “Nobody wants to be hit when they did something wrong.”
463 “Nobody wants to be hit when they did something wrong.” D2(24
464 seconds) OK. Let’s re reread it. D2→”Sometimes parents like to

Excerpt 21

473 “So why do” (deleted ‘So why do’) Umm (98) so don’t need so
474 Something’s wrong. Doing wrong. B→D2→”Furthermore,”
475 B→”Furthermore” “furthermore” B→D2→”Clark says .. says that
476 “Punishment in the form of hitting is not recommended at all
477 because it communicates the message that al that it’s alright to be
478 aggressive and hit someone if you don’t like what they are doing.”
479 //Clark, 1994// D2(9 seconds) “Furthermore, Clark says that” ....
480 “That’s why” ST→D2→D1→ST→D2(20 seconds) //smac// (deleted
481 ‘smac’) //punishment by// “smacking” //is not a good way to teach
482 your/ “to teach your” child about (checked the time) “to teach
483 your child.” Ohh I run out of time. ... D1 and last one. D2..... ST.....
In Excerpt 21, as Chubby continued with her second draft, she revised and deleted redundant information from draft one. She monitored her performance and thought her writing was not going well. Next, she quoted Clark L. from Text B. After this, Chubby carefully consulted the source texts (ST), draft one and draft two for several moments before generalising and commenting on the quote. Here, Chubby was able to abstract that smacking condoned aggressive behaviour and, therefore, could not be used to teach children (477-478). At this point, Chubby became mindful of the time (483). Next, Chubby quoted Text A. She also carried out online revising, making a change for a suitable coordinate conjunction (492-493).

**Excerpt 22**

Excerpt 22 shows Chubby consulting the Coherence SCOBA (CS). She checked her introduction, stating her main idea that children are naughty. After this, Chubby reread her second draft entirely, making only one minor change by adding ‘s’ to ‘reason’ (490, Excerpt 21).

Next, in Excerpt 23, Chubby had just finished rereading the entire second draft and was satisfied that each paragraph had a topic sentence. She then moved to the second SCOBA question as she checked her writing in Thai (524-527, not included here). As shown in the translation (528-538), Chubby explained and justified, to herself, the way she had organised her writing. While she was happy with most of her essay, she was not sure about the last sentence of her fourth paragraph (539). She was also concerned about
her conclusion (540). Despite her reservation, Chubby decided to focus on checking the rest of the essay against the SCOBA. Incidentally, Chubby was aware of the time constraint (541). She whisked through the SCOBA, reading the questions aloud. She indicated that she was happy with pronouns references but she did not actually check her essay for these (541). And although she was not happy with her conclusion (544), Chubby thought that her writing flowed smoothly from one paragraph to the next.

Excerpt 23

In summary, throughout the task, Chubby’s verbalisation was purposeful. She set clear goals and read with an eye to selecting suitable information for her own writing. She also made extensive use of visual indications when she came across key information.
She highlighted, underlined, circled, boxed up, and linked different pieces of information together (Excerpts 7, 13 and 18). Chubby also verbalised to formulate, organise, and monitor her writing effectively.

5.3.4 Developmental changes

Chubby's high school learning experience and her time in New Zealand led her to recognise the importance of writing. Despite not having fully understood the concept of academic writing, Chubby knew that writing was instrumental for her future studies, and came to understand the reading-writing connection during the intervention. Such an understanding was a result of her active participation. Her statement “If I don’t like reading, what will give me information for writing?” (I956) indicated her new conceptual understanding of the reading and writing relationship which formed the basis of academic writing. She also came to recognise the concept of writing-to-learn which she reported occurred because of writing during the intervention: “I only see it when I finished these things this piece of work” (I1306). Chubby also understood the importance of reading in discourse synthesis and knew how to “draw the information from the write ah reading or the text written something from the text” (I134-135). Asked how she selected information for a reading-to-write task, she replied, “If it agrees with my idea or my topics then I will bring it to my writing” (I832). If the information did not align with her idea, she would consider using it for a counterargument, a new concept: “Think about if it doesn’t agree with me” (I840), and “How I can like fight back” (I842). She also became more skilled at expressing her ideas: “After I have learned more I know that I have to strict with my topic” (I464), and “then try to give more information to support” (I466). To overcome her old habit of writing in a loop, verbalisation had helped her to keep the writing topic in mind: “because if you don’t strict with this then you will get lost” (I868), and “say thing that doesn’t relate to this topic again and again” (I873). She valued newly acquired concepts: “I think what I have learned is quite useful for me because I have more like organise writing. For my reading I know I know how to choose the detail of the reading to adapt for my writing” (I1154-1162).

Prior to the intervention, during reading and writing, Chubby normally sounded out words softly to herself to stay motivated and on task: “I don’t say it out loud” (I520). Chubby sometimes used self-instruction “for skipping” (I551). Asked if she used self-questioning, she replied, “not really” (I539). Following the intervention, Chubby
experienced the regulatory function of verbalisation, “It’s like to make my brain work” (I1376), and “focus more” (I1578). She also needed to more practice: “because it’s new” (I1370). She viewed verbalisation as a strategy: “I know how to active my brain all the time con ahh how to focus on my reading task” (I129-130). Furthermore, she felt she could organise her writing better: “I can feel it. I have more like when I do word stuff like written stuff, I have more work plan” (I118-119) and “I know what to do first and what goes next” (I123).

5.4 Case study IV: Mathew

5.4.1 Mathew as a reader and writer of English

Mathew reported not having much difficulty while reading and described how he came to love reading: “In my house home” (I597), “there are lot of book” (I599), “It’s very good for me” (I638), “because it caused me to love reading” (I640) and “I think to read a lot is very useful” (I642).

Mathew saw himself as a good reader who was “fast in reading and fast in understanding” (I969). He usually grasped “the main idea very quickly” (I972). Mathew saw reading as input for writing and the source of his grammatical knowledge. Through reading, he had learned various sentence structures which later helped with his composition: “My academic writing was OK due to, perhaps, my behaviour of reading. I often read English novel and magazine. Accordingly, I had no problem with writing skills. Many sentence patterns are ready to come out from my mind” (M).

Despite claiming he did not regard writing difficult, Mathew still struggled with writing because “there are a lot of things to do when I have to write. Especially vocabulary choosing, I find it difficult. I often have a lot of ideas about writing something, but I cannot use enough and appropriate words. This means I should use synonyms to make my writing better” (WD). Mathew kept his audience in mind and thought his lexical choice would facilitate their comprehension: “The readers can understand easily what I want to say if I use the words effectively” (WD).

While Mathew understood the concept of audience awareness and aimed to produce reader-friendly text, he often neglected counterarguments: “I need to think about the opposite side of ideas. What can people argue me in my writing” (WD). Mathew often
forgot how others might react to his writing: “I forget to think about readers. They can ask me if it true or not …because I only think and express sth. with my opinion” (WD).

Asked about goal-setting, Mathew stated that it was important to carry out the task assigned by the teacher: “When I get the work, I must complete it” (I857) and “Even though it seems difficult it must be achieved” (I865). Mathew also reported that getting a good grade and finishing work in time were “always important” (J902). Working to get good grades and strictly following the teacher’s instructions often meant that he lacked opportunities to set his own learning goals.

### 5.4.2 Essay argument structure

**Introductory paragraph:**

Nowadays, children are gotten a lot of violations from adults such as hitting them or giving them with cruel punishment (1. Claim). In fact, there is another way to teach children effectively what is right and what is wrong without using violations (2. Claim). Is it still necessary to follow and believe the old statement “Spare the rod, spoil the child”? (3. Claim)

Mathew began his introduction with a strong statement (1). He appeared to have based this claim on public knowledge about common physical punishment to children by adults in Thailand. In this first sentence, Mathew used ‘violences’, ‘hitting’, ‘cruel’, and ‘punishment’ to form lexical cohesion and to build up an emotional appeal to the reader. Given that hitting is probably the most prevalent form of child discipline in Thailand, Mathew’s first claim would ring true to most Thai audience. Next, he contrasted the ill treatment to children with his claim that children could be dealt with in a non-violent way (2). In this second sentence, he used an opposing view to signify his objection to hitting. Having stated the alternative to cruel punishment, he questioned the validity of the old proverb. In this opening paragraph, his introduction served to draw the reader’s attention to the use of violence against children (3). His questioning of the proverb signalled that such ill treatment must be brought under scrutiny.

In the second paragraph, Mathew began by explicitly announcing his main claim (4). He justified this on the ground that hitting caused pain. This statement could also serve as a warrant as physical discomfort resulting from bodily abuse is that of general knowledge (5). His next ground (6) drew on public knowledge that hurting others at will
was against the law (6). Here, he established concordance between his claim and ground by appealing to what is generally and socially accepted in most civilised societies. (This sentence could also qualify as a warrant). Mathew then made a new claim stating why children rights should not be violated (7). He drew on specific data from text C to support his claim (8). Next, he restated his ground (data) from Text C (9). While the information from Text C did lend some credibility to his proposition, it was not cited correctly.

Second paragraph:

> I don’t think so (4. Claim). I don’t agree with that statement because hitting or smacking children can cause them pain (5. Ground). This is illegal action in which people cannot whenever hurt anyone if they want (6. Ground). Children do have rights like other human beings or their parents, so they couldn’t get something cruel and aggressive like that (7. Claim). According to the text C, it says that all people have basic rights (8. Ground). Children is not the exception even if they are small and dependent (9. Ground).

Third paragraph:

> In addition, the way to teach children effectively is using the positive reinforcement (10. Claim). The reinforcement is “making a point to let the child know that you notice efforts towards good behavior” (Clark, 1994) (11. Ground). Easily, this way is to encourage children to continue doing something that they did well and give some comments (12. Warrant). For example, use the word ‘thank you’ if they help you something (13. Ground). It will make them behave better later (14. Ground).

In the third paragraph, Mathew stated another claim to introduce positive reinforcement as an alternative to physical disciplinary actions (10). He included a verbatim quote from Text A to support this (11). His citation, however, was flawed in that he cited Clark, one of the two authors of Text B. Next, Mathew continued to base his argument on Text A mainly by paraphrasing (12). As his claim began to gain persuasive strength, Mathew included another direct quote ‘thank you’ to exemplify his proposition (13). He then offered another ground stating the benefit of positive reinforcement (14). Although he did not always acknowledge the source, it is clear that his text was based on key ideas from Text A.
Conclusion:

In conclusion, the punishment in the form of smacking is not only the useless method but also the illegal action (15. Claim). Parents who use this way to teach their children cannot perfectly make them learn what is really right and what is really wrong (16. Ground). The old proverb “Spare the rod, spoil the child” is unbelievably unexpendable anymore (17. Claim).

In the first sentence of his final paragraph (15), Mathew integrated two ideas from Text A and Text C. Principally, the sentence summarised the gist of the source texts. Aiming to provide his reader with more plausible data and justifications, Mathew then stated his ground drawing on Text A (16). The first two sentences in this paragraph, thus, effectively propelled his argument to the conclusion. Having presented his argument inductively, Mathew once more explicitly spelled out his view against the old proverb. Although he summed up his argument in the last sentence of his conclusion, the statement fell short of making a lasting impression due to his inappropriate choice of vocabulary and, in this case, double negative (17).

Overall, Mathew based his writing on the three source texts provided. He managed to weave together several pieces of information into a relatively coherent argument. Textual coherence was established through the use of several lexical items which cohered across his various claims. Note that the Toulmin’s elements were coded for analysis only. Mathew’s verbalisation showed no trace of data on TM use. A closer look at his writing also revealed that Mathew’s argument was one-sided. He did not consider any possible opposing views. Had he done this, he could have used the English and the Thai proverbs to support a pro-smacking stance. And although smacking was elucidated in the first sentence of his introduction, this was not strong enough to be considered a rebuttal.

5.4.3 Microgenetic findings

Mathew’s microgenetic findings show that he was an active reader. He engaged critically with the sources texts and used verbalisation regularly to regulate his thinking and actions. While reading, Mathew set clear goals, monitored his comprehension often, and paid attention to differences and similarities in the source texts. Also, Mathew formed a clear task representation with a comprehensive orientation basis. He carried out most of the actions as oriented and sought to regulate his writing through verbalisation.
5.4.3.1 Intertextuality

Mathew demonstrated his self-regulation over intertextuality by interacting with the instructions and the source texts meaningfully and constructively. While reading, he set clear goals and regularly interacted with the source texts. He also monitored his comprehension. As shown later in this section, Mathew’s specific comments on the authors’ positions indicated that he had understood and evaluated the opinions of all three authors.

Excerpt 1 highlights how Mathew read the instruction sheet. Mathew demonstrated his self-regulation by orienting himself toward his reading action (1-3).

Excerpt 1

1 OK, I have 10 minutes to read it completely. (held his pencil in his hand) So,
2 there’s some introduction (circled ‘Introduction’) I think I should read it out
3 loud to understand better. Most parents would like their children to stay out
4 of trouble, but it is difficult to find a child who doesn’t do anything wrong. It
5 is difficult to find a child who doesn’t do anything wrong. I agree with this
6 (nodded). Children do get into trouble from time to time and they are told off
7 or punished when they misbehave (pronounced ‘misbehave’ slowly) While
8 some people avoid physical punishment and will not smack their children,
9 others still believe that smacking or hitting. What does the word smack mean?
10 I think smacking hitting, smack can refer to hit. (underlined ‘smacking’ and
11 ‘hitting’) Hitting is a way to show smacking or hitting is a way to show
12 parental love (circled ‘a way’ and ‘parental love’). This is the introduction.

During orientation, Mathew acknowledged the time allocated for reading the instructions. He set an explicit goal to read aloud and justified that this would assist with his comprehension. He then read aloud as intended. He adjusted his reading speed as he came across ‘misbehave’ indicating this word was new to him (7). He then continued until he encountered another unknown word ‘smacking’. Here, Mathew used self-questioning to help him focus his attention to solve the lexical problem (9). Noticing the contrastive conjunction ‘or’ signifying an alternative meaning, Mathew then guessed that smacking was equivalent to hitting (10). Finally, he refocused his attention by noting that the paragraph served as the introduction (12).
Excerpt 2 provides further evidence of Mathew’s awareness of intertextuality. Here, he had finished reading the instruction sheet and was about to read the source texts. During orientation, Mathew approached the task by stating the number of texts he had to read (50). He glanced at the three titles and briefly summarised that the overall content of the sources texts were about “punishment of children” (54). He came to this generalisation by using the titles to predict the reading content in connection to not only the titles but also to the task prompt he had read earlier (M).

His statement “Can help me” (54-55) indicated he kept the instructions in mind, evidence of intertextuality at work. Note that at this point, Mathew had not worked out the meaning of ‘discipline’ as this word was new to him and he pronounced it incorrectly. Nonetheless, he chose to ignore it at his first encounter (level-two regulation/problem noticed/unsolved). He then set a reading goal to read fast due to the time constraint (56-57). Mathew’s self-correction indicated he was monitoring his speech and conscious of
his grammatical error (no much time) and remedied this (not much time) immediately (57). During the actual reading or the execution of an action, Mathew actively monitored his performance. He encountered ‘incentive’ and used self-questioning to focus on this word. He then decided to skip it (60) (level-two regulation/problem noticed/unsolved). He continued reading and he questioned the nature of punishment whether it had positive or negative meaning (63). Next, he tried to discern ‘the least effective method’ (63) conceptually. He was trying to understand if something ‘least effective’ was still desirable (level-two regulation/problem noticed/unsolved). Here he attempted to abstract ‘least effective’ in relation to the concept of punishment (62). His question (63) also indicated that he was monitoring his comprehension. Mathew’s behaviour denoted the beginning of his internalisation of what he read as he attempted to abstract and infer. He tried to do this by putting the author’s words into his own words, which suggests the concept was becoming part of his conceptual thinking. As he finished reading Text A, Mathew concluded that punishment was not positive (level-five-regulation/without external assistance) and summarised his understanding by stating the relationship between positive reinforcement, effective method and discipline (71-72). This statement demonstrated self-regulation in terms of comprehension monitoring and performance evaluation. He also noted the source of this article as he finished reading (73-74).

Excerpt 3

About the text B What will help my child learn not to do it again, Not to do it again (circled ‘to do it’ and ‘it’, drew an upward pointing arrow above ‘it’) I think it refers to something wrong. What will help my child learn not to do something wrong again. Yep.

...
In Excerpt 3, as Mathew was about to read Text B. As he read the title, he oriented himself by putting the title in his own words. He guessed what the pronoun ‘it’ referred to (77). Next, during execution, he tested his hypothesis by verbally substituting ‘it’ with ‘something wrong’ (77-78). Mathew was happy with the sentence he produced. As his projected meaning worked grammatically and semantically, he confirmed “yep” indicating a control aspect of his action (level-five regulation/without external assistance). Following this, he finished the first two sentences (not shown here). He then shifted his attention to goal setting (82). To aid his comprehension, Mathew intended to highlight text segments (83-84) and to take notes (85). These goals reflected reading strategies reported in the MRSQ. He knew from his reading experience that underlining, circling and note-taking enhanced his comprehension and was able to direct his attention to these strategies. Following this, Mathew used self-instruction to refocus his attention back to Text B, rereading the second sentence (86). Next, he came to understand ‘rearrange’, working out the meaning from the prefix ‘re’ (level-five regulation/without external assistance). In the following excerpt, Mathew continued to consciously highlight text segments to help him focus and understand better.

**Excerpt 4**

89. **r**earrange the environment to avoid trouble occurring in the first place. It may be impossible for your newly-standing child to ignore the temptation of (.). 
90. **d**angling (.). tablecloth. (.). I have no idea with these three words. I can underline. I could underline temptation, dangling and tablecloth (underlined ‘temptation’, ‘dangling’ and ‘tablecloth’) What is these words?  
91. **P**unishment is oh punishment in the form of hitting is not recommended. I think it I think I can’t understand this whole paragraph, (marked the first paragraph of text B with), a curly bracket) (.). But but the second paragraph (marked the second paragraph of text B with), a curly bracket), especially from the first sentences (circled ‘Punishment in the form of hitting is not recommended at all’) I think it’s the main idea.  
92. **P**unishment in the form of hitting is not recommended at all. So, I think I think the author have has the negative feeling has the negative feeling of punishment in the form of hitting.  

In Excerpt 4, Mathew used self-instruction to orient himself to underline unknown words prior to the execution this action (92-93). Immediately afterward, he reiterated his lack of understanding through a question (93). He demonstrated his ability to tolerate ambiguity and continued reading, indicating his comprehension was not affected. As he
read the first sentence of paragraph two, he self-corrected his mispronunciation (94) which denoted self-monitoring or control. He then went back to mark the first paragraph and articulated that comprehension has not been achieved, evidence of an instance of control (level-two regulation/problem noticed/unsolved). Despite his lack of understanding of paragraph one, Mathew was able to recognise the main idea of Text B. Note that Mathew did not simply identify the first sentence of paragraph two as a topic sentence with the most important information, but he was able to infer from the sentence the anti-smacking stance conveyed by the author, putting this in his own words. This indicated that Mathew had understood and evaluate the author’s stance and understanding (level-five regulation/without external assistance).

Excerpt 5

\textit{It communicates the message that it’s alright to be aggressive and hit someone if you don’t like what they are doing. \textit{Ha!}?? Remember that punishment is not discipline but a sign that dis a sign that discipline has been unsuccessful. (12 seconds) I’m not quite sure that these two sentences the first and the second (...) are not the same meaning. Punishment is the form of hitting punishment in the form of hitting is not recommended at all. Recommended (circled ‘recommended’) I think the author have has the negative feeling on punishment especially for especially in hitting but the second the second sentence show me that (...) that this this sentence can send me the message can show the message that alright it’s alright alright good. It’s OK to be aggressive (drew an arrow pointing downward from ‘aggressive’ aggressive and hit someone if I don’t like (shook his head) what they are doing what they have done (...) I have problem. (scratched his right ear) Maybe I can skip and I would be back to understand again. (looked at his watch, made a circular movement on the watch)}

\ldots

\textit{This author. Oh this text is written by Durrant, J. E. This is the name of the author, and he or she, not sure. He or she has positive, has a good feeling with children (circled ‘children’ in the last sentence of text C). He or she thinks that children have a rights. They they are all human beings with with the basic rights have a rights like like any adults.}

In Excerpt 5, Mathew had difficulty understanding paragraph two where the first and the second sentences did not cohere due to the absence of the causal conjunction
‘because’ (level-two regulation/problem noticed/unsolved). Mathew then continued with the third sentence, before returning to reflect on the first two sentences for 12 seconds. His verbalisation (105-106) showed Mathew engaging with the text through abbreviated private speech: “I am not quite sure that these two sentences the first and the second [follow one another/cohere/make sense together. They] are not the same meaning” (M).

Having established that the author did not condone smacking (109), Mathew was perplexed by his [mis]interpretation of the second sentence that hitting others at will was acceptable (111). His misunderstanding appeared to result from his misplaced attention. Mathew focused on the second half of the second sentence (embedded clause) and not on the anaphoric reference ‘It’ at the beginning of the sentence which pointed back to ‘hitting’ in the first sentence. Conscious of the time constraint (115), Mathew acknowledged the problem (114) but decided to continue reading (115) (level-two regulation/problem noticed/unsolved).

After this, Mathew read Text C with no apparent difficulty (data not shown here) and as he finished, his specific comments on the authors’ positions (126-130) indicated that he had understood and evaluated the author’s opinion (level-five regulation/without external assistance). Next, to illustrate Mathew’s microgenetic development, a segment from Mathew’s verbalisation data much later in the activity is shown below.

**Excerpt 6**

During his subsequent reading of Text B while looking for supporting information for his first draft (D1), Mathew was able to successfully solve the comprehension
problem. Here, Mathew progressed from level-two (see Excerpt 5) to level-five regulation (without external assistance) as he was able to work out the causal relationship between the first and second sentences of the second paragraph of Text B (B2). His verbalisation showed that he was now attending to the anaphoric reference “It” and substituting this with “smacking children” (210). Moreover, Mathew appropriated the author’s anti-smacking stance and articulated this in his own words (211-213). His affirmative “Aha” (213) indicated he was monitoring his interpretation of B2 and was satisfied with it.

Further evidence that Mathew read interactively is shown next in Excerpt 7, taken from Mathew’s subsequent reading of Text A. Mathew set a goal to underline useful text segments (182). Underlining served to orient his attention and was used when Mathew identified key information in Text A (184-185). Also, the control aspect of this reading action was evident as Mathew assessed and confirmed that the segment was useful (185). Furthermore, he was able to verbalise in his own words his understanding of the key messages which discredited punishment and promoted positive reinforcement (187-190 (level-five regulation/without external assistance). Also, he articulated his interpretation of positive reinforcement (191-193) and affirmed the soundness of these messages (193). Next, Mathew rehearsed aloud how he would use the information in his writing (194) before underlining the segment he intended to paraphrase (194-196).

Excerpt 7
5.4.3.2 Task representation

There was evidence that Mathew began to construct his task representation as early as while he was reading the task prompt. In Excerpt 8, Mathew articulated his task representation by restating the instruction in his own words and generating his own thoughts about the task he was about to commence. He formed a clear task representation with a comprehensive orientation basis. Mathew recognised potential usages of the source texts (26-27), acknowledged the number of texts he had to read (28), and knew the basis of his key argument position (29-30). He also verbalised that his writing involved multiple-draft production (30 and 31&44). He considered the time limit (31&39), planned the structure of his essay (37-38), and was flexible with his planning (41). He monitored his actions and evaluated his decisions (42-43). He focussed on source Text Appropriation, set a goal to paraphrase and acknowledged his weaknesses (43-45). He also set a specific goal for improvement and intended to revise using the coherence SCOBA (47-49). These actions were evidence of self-regulation.

Excerpt 8

26 Oh, yes I have source texts. I have more information to decide to make decision what option that I want to choose. ISRead texts A, B, C (circled A, B and C) I have three three piece of information. ISPlan your writing, organise your ideas write a coherent paragraph. Oh, I have to write essay on what I have decide A or B (looked at his watch, read silently for 4 seconds) I have to write 2 drafts. OK, I have one and (a half) hours to complete my essay.

37 There are I think there are if there are 5 paragraphs, is it good? Five paragraph in my essay, but I’m not sure if I can make it that in time. (looked at his watch)
38 I have one and a half hours. It start on (made a circling motion with his pen on the face of his watch and made a mental note of his starting time) OK, so I have to make my plan of writing which is I have to to write at least 4 paragraph. (wrote this on the top of his source text sheet) I think this is good enough and ISI have to bring all useful information in my writing. I have to write 2 drafts and complete one and I also have to OK, I have to paraphrase some of the information. I always have a problem with with paraphrasing and today I try to paraphrase better than I did before. And also when I complete my writing maybe a second draft I have to check my essay (glanced at the SCOBA) my writing make sense or not. I have to check with SCOBA technique. I always for forget to use it.
The above aspects of Mathew’s task representation indicated that he did not simply read the task prompt, but had factored each instruction into his conceptualisation of this writing plan. His verbalisation served as the orienting basis for his planning. He also carried out actions as oriented and regularly monitored both his reading and verbalisation. Overall, Mathew demonstrated level-five regulation (without external assistance). After this, Mathew demonstrated object-regulated behaviour, as shown next.

In Excerpt 9, Mathew agreed with Option A (smacking) (137-138), but as he considered it important to integrate source information in his writing, he chose Option B (anti-smacking) (138-139). His decision reflected irreducible tension between the subject and the tools (Wertsch, 1998). While the information was useful for textual borrowing, the texts simultaneously restricted Mathew’s freedom of choice. Despite being object-regulated, Mathew demonstrated his conceptual understanding of reading-to-write as a scientific concept and the importance of supporting evidence. Informed by this theoretical understanding, Mathew saw the integration of source information imperative for his essay. Had he chosen to take a pro-smacking stance, the English and Thai proverbs stating the time-honoured physical punishment practice could have been his main claim, while the source texts could have served as counterarguments.

**Excerpt 9**

> OK, let me, let myself choose the option A or B. The option A, (...) the option A agrees with with punishment in the form of hitting in the form of smacking, but the option B doesn’t. The option B doesn’t agree with. The option B gives me that hitting is the form of violence and should be made illegal. If parents or adults hit their children, it would, it would be illegal (...) (looked at the instruction sheet) Umm ST(13 seconds) In my opinion, I I prefer the option (accepted a pen handed to him by the researcher). I prefer I prefer the option A, (...) but 3 pieces of information is quite useful if I choose the option B. Smacking children is a form of violence and should be made illegal should be made illegal.

After this, as shown in Excerpt 10, Mathew opted to brainstorm mentally and not write his plan on paper (147-149). His orientation towards his essay began with verbalising how he would structure his essay. Being mindful of the time constraint (152), Mathew remained flexible regarding how many paragraphs he was going to write (151-152). Essentially, the execution of his task representation, occurred at the verbal level
and served as further orientation for his subsequent writing. Having roughly planned the structure of his essay, Mathew set a goal to work on his topic sentence (156) and began by copying down Option B.

**Excerpt 10**

(flicked his pen repeatedly) (....) (put ST on top of IS) BS I think I can brainstorm (...) (tapped ST with his right hand) some of the information in my head (pointed at his head with his right hand) and not write. BS I think I could write (pulled out the blank sheet) the first draft the first draft of the essay.

ST⇒BS There are at least it should have at least 4 paragraph. One for introduction, one for conclusion, and maybe 2, 3 if I have time for the body of my writing.

If I choose (picked up the instruction sheet/IS) IS If I choose the B option. The option B. D1 wrote ‘B’ on the blank sheet) BS I have to make my my topic sentence my topic sentence IS (13 seconds) (put the blank sheet on top of the source texts) D1 I choose B. I I could write a concept of quest B first. Children (started to write) IS⇒D1 Smacking children is a form of violence of violence

Next in Excerpt 11, Mathew continued to form the orientation basis of his writing and constructed his clear task representation by focusing first on the introduction (170) through self-questioning (171), to which his initial answer was to base the introduction on his background knowledge of violence against children (172-173). Having conceptualised the introduction, Mathew did not actually carry out the execution and decided to move on to the body paragraph. Although Mathew’s orientation was not followed through, this did not happen haphazardly. On the contrary, a number of successive decisions were made systematically. Mathew’s decision to leave the introduction was deliberate.

Following his reflection (174) and having assessed the situation (175), he instructed himself to return to this task later (176). His goal to rework the introduction was made explicit by his leaving adequate space to be filled. Next, Mathew continued to work on his task representation. He set clear goals to list his ideas (177-178) and substantiate these with information from the source texts (180-181).
Additionally, Mathew’s verbalisation also showed that he continued to orient himself and create a meaningful task representation as he progressed through his activity. As shown in Excerpt 12, Mathew set clear goals to generate his own statements after he had integrated source information into his writing (312-313), to provide examples (314) and to correct his writing (316).

5.4.3.3 Logic, coherence, and revision

While logical thinking can also be discerned in the preceding sections, it is most evident in how Mathew organised the content of his essay. Coherence was checked during revision towards the end of the writing activity.
Excerpt 13 highlights Mathew’s explicit goal to provide supporting evidence in his writing and to draw supporting evidence from the source texts. This goal illustrated Mathew’s understanding of discourse synthesis. It served to orient his logical thinking and his search for appropriate information from the source texts.

Next, in Excerpt 14, Mathew worked on his first draft (D1). Previously, he had dedicated paragraph one to objecting to smacking and was now focusing on presenting an alternative in paragraph two. By understanding ‘punishment in the form of hitting is not recommended’ in Text B (222), he was able to abstract an idea that ‘the way to teach children effectively’ was by using some other means (M). Here, Mathew demonstrated his ability to abstract source information as opposed to simply mining it (level-five regulation/without external assistance). This indicated reading was used as a thinking tool integral to Mathew’s psychological functions. As Text B did not promote smacking, Mathew then decided to use information from Text A to complete his sentence. Next, he used self-instruction to help him generate ideas. His deliberate attempt to stay focused was shown through repetitive verbalisation (225-226).

In addition, Mathew knew that his writing became more effective when substantiated with source information and set a goal to do so (230-231). This goal served to orient further action and he was able to identify a segment in Text A for this purpose.
The execution of the action, however, was not complete as Mathew questioned whether to paraphrase the information and decided to revisit this later (level-two regulation/problem noticed/unsolved). Again, his decision was deliberate and a space visibly marked with lines was left to remind him of this task. Here, Mathew used verbalisation, together with a symbol (lines), as a means to self-regulate. He then considered his conclusion but thought it should be done after the body paragraphs had been written (level-two regulation/problem unsolved) and set a goal to end his introduction with a question that would be answered in the ensuing paragraph (256-257).

Excerpt 14

Excerpt 15 shows Mathew working on his second draft (D2) and focused on the introduction. He verbalised to rehearse ideas before writing them down (italicised and underlined), articulated and inscribed what he had just verbalised (italicised in quotation marks), and reread aloud after writing (italicised & underlined in quotation marks) (323-325). Verbalisation was also a means for Mathew to work out the correct spelling for ‘necessary’ (327-329). The use of verbalisation was thus meaningful and strategic.
Next, Mathew worked on ending the introduction with a question. Having set a clear goal as an orientation basis to end his introduction with a question earlier (Excerpt 14, 256), Mathew now carried out his action. Having drafted the introduction the way he had intended to, Mathew reflected on it for a few seconds (334). His reflection represented the control aspect following the action and led Mathew to notice that he had used ‘violence’ twice in this short introductory paragraph. Mathew repeated this word, trying to work out a synonym for it (335-336). He then reread the question, but he had not forgotten ‘violence’ and spent another 10 seconds thinking about a synonym. Finally he decided to continue with a new paragraph.

As previously oriented (256-257, Excerpt 14), Mathew began the paragraph by answering the question posted in the introduction. Again, he used verbalisation to rehearse ideas before writing them down (337-338). And as Mathew began his third draft (D3, 378 onwards), he demonstrated self-regulation by returning to check his second draft (D2) and ensuring he had topic sentences as well as sufficient supporting information. He reread D2 for several seconds and was generally happy with his writing. Mathew’s comment regarding grammatical errors indicated that he had checked his sentences. He then self-instructed to check his work more thoroughly as he wrote. Mathew’s checking of his second draft constituted control of his writing action, while his goal to monitor what he was about to write represented the next phase of the orientation basis for future action.

Excerpt 15
In Excerpt 16, Mathew’s self-regulation was evident as he recounted how he had organised the second paragraph of this third draft. He was able to justify and describe his ideas chronologically and coherently (424-428). Mathew was happy with his writing so far and set out to orient himself as to how he would organise the next paragraph (430-431). Having objected to smacking in the second paragraph, Mathew was ready to present an alternative viewpoint next.

**Excerpt 16**

sense? Does it answer my question? My question is am I do I agree with this statement with that punishment in the form of hitting? And I and my answer is is no I don’t think so. I don’t agree with that. I give the reason that hitting and smacking children is the illegal is the illegal behaviour the illegal action. Then I give some reasons to support again. I take this information about rights about the human being rights to support them. It is OK I think. And the second paragraph of mine is about if I don’t agree with this paragraph, this paragraph I should suggest the way the way that people must use to teach to teach their children what is right what is wrong. D1 From my from my draft. Yep.
Excerpt 17 shows Mathew’s orientation toward his conclusion. He set a goal to summarise his earlier content but was not quite sure how to go about this (456). His attempts to bring this task under his regulation was demonstrated through his successive self-questioning (460-462). Previously, Mathew had not written a draft conclusion but left this task, intending to return to it once he had written the body paragraph of his essay (236-238, Excerpt 14). Here, he worked on the conclusion as oriented. He began by selecting key information from earlier paragraphs and rephrasing this before putting it in his writing. He then rewrote his conclusion, transferring ideas from his second draft and rephrasing these once more onto his third draft. Mathew also used verbalisation to sound out ideas and reread these once they were written down. In this excerpt, he progressed from level-two (problem unsolved) to level-five regulation (without external assistance).

**Excerpt 17**

In my conclusion I have to summarise what I have said above (pointed at the second paragraph). Above is that I don’t think. I don’t agree with this (pointed at the question in the introduction) and I give suggestions with this. (pointed at the third paragraph then back to the introduction) (…) How can I summarise? Umm (went back to his 1st draft)

How can I summarise? Do I have to summarise that? (Turned over D1 and folded in half.) I have to summarise what? (The researcher told the subject not

(...)(began drafting his D2 conclusion) Not only the punishment in the form of hitting is not only is not only the uneffective only useless not only the useless method but also the illegals but also the illegal action.” “Parents who use who use this who use this way (…) cannot” “completely perfectly” “completely perfectly exactly” “cannot.” Parents who use this way cannot exactly teach” or “tell” or “make the children make children learn what is really right and” what is really wrong (drew a line instead of writing this last

wrong.” (wrote ‘real wrong’) This is my conclusion but I think it’s not quite complete. (15 seconds) IS 12 seconds) I begin with the proverb spare the rod spoil the child. Yes, it is good to begin with this proverb too but how can I how can I then how can I end with this proverb and make the impression to the reader? In conclusion, the punishment in the form of
Also shown in Excerpt 17 was Mathew’s on-going revision which pointed to the control aspect of his action. Although Mathew was happy with how he had begun his essay, he was not quite content with his conclusion and thought it was rather short. He then set a goal to mention the proverb in his concluding remark and questioned how to make a lasting impression on the reader. Having oriented himself, Mathew completed the action as shown in Excerpt 18.

**Excerpt 18**

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unbelievably. “The old proverb” “The old proverb spare spare the rod, spoil the child” D3 (15 seconds) is (...) “is unbelievably unbelievably used” D3 (10 seconds)
“is unbelievably” (deleted ‘used’) valuable “The old proverb spare the rod and spoil the child unbelievably” (...) is not “unbelievably” (17 seconds) (inserted ‘not’ “is not unbelievably expendable” anymore (whispered) (8 seconds). “The old proverb spare the rod spoil the child is” (...) expendable (...) expendable (not) (deleted ‘not’ and inserted ‘un’ then counted the paragraphs.)
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In Excerpt 18, Mathew verbalised to rehearse ideas. In his quest to impress the reader, Mathew struggled to find a suitable adverb and an adjective. His choice of ‘unbelievably’ proved to be inappropriate as Mathew intended to use it to discredit the proverb, meaning that the statement should not be believed or trusted instead of ‘incredibly’ or ‘unimaginably’ (M). Also, the adjective ‘expendable’ already means something that can be discarded without being missed and when Mathew added the prefix ‘un’, he effectively turned this word into a double negative which, in this case, only further confused the reader. Mathew appeared oblivious to the poor lexical choices (level-one regulation/problem unnoticed).

Next, Excerpt 19 shows Mathew’s decision to skip the title as object-regulated and other-regulated. Object-regulation was evident as Mathew consulted the instruction. When he found no mention of the title in the task prompt (498-499), he left his essay without a title. Other-regulation was discerned through the notion that Mathew thought the teacher (researcher) had not specified that the title was required in the instruction. Object-regulated and other-regulated behaviours are not uncommon in teacher-directed classrooms across Thailand.
In Excerpt 20, Mathew checked his essay against the coherence SCOBA (CS). He appeared satisfied with his writing, justifying how he had put his ideas together as he went through each CS question. The use of the CS was, however, somewhat, superficial. Mathew did not look for how to improve his writing. The outcome of his assessment of his work seemed predetermined. This could be because he had worked systematically throughout the entire reading-to-write activity and perhaps had done a considerable amount of thinking, editing, and revising as he progressed through task before he completed his writing (as shown in Excerpts 15-16). Although his final remarks revealed some form of concession that the work could be better, Mathew was generally happy with his work.
In summary, Mathew demonstrated active and self-regulated reading behaviour. He approached his task with sufficient orientation, executed a number of strategic actions, and monitored his performance in a timely manner. Mathew demonstrated considerable self-regulation as he had understood the concept of academic writing and the significance of providing supporting information to his claims. He knew that he needed to draw data from the sources texts and not from his own experience. Of note is that throughout the entire verbalisation, Mathew did not mention the Toulmin’s model. He had not used the model to mediate his writing while planning, drafting or revising. In his self-reflection data, he wrote “I forgot to use the Toulmin system. I did not have the rebuttal or opposite idea. I offer my idea but forgot the opposite side”.

5.4.4 Development changes

Mathew reported three major changes, one regarding his performance and the other two reflecting strategy use. Firstly, while he thought the quality of his work was “good both before and after the project” (M), Mathew considered his writing speed much improved: “it’s obviously better, but I mean the process in writing especially how to bring ideas in rush time and how to fast check accuracy” (M) and “After the project, I do fast-writing than I often did before” (M). He added, “You taught me a lot of knowledge in writing academic” (I156), “knowledge about reference writing” (I139-140), and “The skills that you teach us are very important for group work and individual research” (I171-172/RT). Mathew also understood the role of source texts and the concept of writing to learn: “If I am going to write something, I need to read the information” (I571-572) and “I mean if we read something and want to really understand it, sometimes you have to take note. Sometimes you have to write it. Write it out.” (I581-583/RT).

Secondly, Mathew saw improvement in strategy use. Asked if he understood the term ‘strategy’ better, he wrote: “Before I thought a skill and a strategy were the same” (US). He came to understand that strategy could only be acquired through rehearsal and not a quick fix for a problem: “the importance after realising the difference … we have to practice” (US). Having clear reading purposes was one of his strategies: “To me if I have a purpose on that reading activity, it will make me I mean read faster” (I1048-1049) and “if there is a purpose for reading to understand, I must know which information I must read and try to understand” (I1054-1055/RT), and “which part is important detail to make me understand as I have my purpose I will know” (I1059-1060/RT). Another
reading goal was to read within the time limit: “If I must read according to the time, depending on how much time I have, I will know which part to skip or ignore” (I1060-1061/RT). Next he focussed on understanding the title and used predicting strategy. After reading the title, “I predict what will happen in the text (I986) and after that I read the first sentence in the first paragraph first” (I989). He tried “to read the first paragraph or the topic something like that to see if they reflect the main idea of the story. After that get more detail from subsequent paragraphs” (I994-995/RT). Mathew also recognised that the main idea was not always located in the first paragraph and “could be in the middle of the text or even the last paragraph” (I1002-1003/RT).

Mathew reported using goal-setting more strategically both in his learning context and everyday life. He valued goal-setting in relation to his need for personal space: “As a human being sometimes we want [personal time]” (I826) and “if I only have little time for me I feel awful in myself” (I828-829). Valuing his personal time, Mathew set out to organise his study and social activities: “I set up my plan quite effectively by using information from the course-out-line [sic] of each subject” (M). Evidently, Mathew knew about planning and goal-setting prior to the intervention. The notable differences following the intervention were that he began to prioritise, monitor, and modify his goals as opposed to simply setting them and allowing ‘spur of the moment’ events to alter his plans. Prior to the intervention, his goals and plans were object-regulated by the course outlines and despite following the timetable set up on his notebook, Mathew used to deal with his daily events as they happened and made his decisions on the spot. He summed up how things had changed following the intervention: “I didn’t set any priority for my to-do list until I had attended your project. Once I knew how and why to do setting priority, things got easier” (M). Additionally, prior to the intervention, Mathew knew how to write to discuss different viewpoints, but he only came to understand argumentation from the Toulmin’s perspective during the intervention. Incidentally, he forgot to apply this knowledge during his reading-to-write task. In this self-reflection form, Mathew stated that he forgot the TM. This indicated that he needed to set a clear goal to include the TM in his writing activity.

Thirdly, Mathew described speech as essential to his learning: “The more we collaboratively speak and collaboratively think the more it helps with my understanding” (I1758-1759/RT). Specifically, Mathew considered verbalisation invaluable to his reading and writing: “Some information that you gave me in your project I mean the
techniques like verbalisation” (I183-184). “I never thought of using verbalisation before” (I186-187). He stated, “Right now I can use it. Use verbalisation to make make myself in in doing anything” (I191-192). Asked if he used verbalisation in class, Mathew replied, “No because in the class there are a lot of students” (I198) and “I can’t concentrate” (I202). He continued, “I use it when I stay alone” (I212) and “It’s very useful” (I222). Mathew reported, “I prefer to keep quiet [in class] possibly because the large number of people plus the fact that Thai people are not very brave to speak out. By this I mean feeling afraid that you might say it wrong” (I1730-1732/RT).

5.5 Case study V: Rose

5.5.1 Rose as a reader and writer of English

As the only child who did not grow up with a reading culture, Rose did not recall owning any books that she could read for leisure: “I mostly read textbooks. I rarely read anything else. . . . My mum reads very little. She hardly buys me any book to read – only textbooks and most of them are in Thai” (M/RT). Rose reported vocabulary difficulty as her major reading difficulty and would continue reading only if she could understand every printed word. Rose believed all texts were perfectly written: “Reading is perfect urr perfect article” (I275), and it was her task to decode the meanings from what she read. Rose preferred writing to reading: “I want to writing more reading because I think reading is difficult more writing” (I217). She thought writing gave her opportunity to create her own text: “writing is ahh paper and I can write anything” (I275-276).

Rose had no experience in reading-to-write as seen in discourse synthesis. Reading gave her models of syntax but the information she read was not used as a foundation of her writing. In her self-report on her writing practice, Rose revealed many concerns indicating that she found writing challenging: “English writing is difficult for me because writing has many principles. I do not know how to write well, so I write it simply” (WD). Rose sometimes began writing without clear understanding of the topic assigned by the teacher: “I do not get a topic, so my outline is irrelevant” (WD). Another difficulty concerned the use of supporting sentences: “An essay has many paragraphs, so I am confused about supporting details. Sometime, the details repeat again, so I change my body that I waste a time” (WD). Spelling also caused a major concern: “I have a problem with spelling most” and “sometime, I choose a wrong word, so meaning change from my idea” (WD). Amidst these shortcomings, nevertheless, Rose demonstrated her
audience awareness. “A big problem for me is that when I want to tell something, my reader do not understand same me. Sometime, my essay becomes funny story. I do not how to tell to my reader correctly” (WD).

Despite having writing difficulties, Rose reported she would not ask any questions in class and did not seek feedback specific to her work. She preferred collective feedback in class whereby the teacher generally explained issues common to most students: “teacher should explain me in class but don’t tell my name” (I207). Rose explained: “I hadn’t had opportunity to consult teacher one-by-one” (I194) and “teacher is busy and I shouldn’t interrupt him or her” (I204-205). Here, Rose demonstrated her respect and consideration to the teacher as valued in Thai culture. During the intervention, Rose did not ask the researcher any questions even when she did not understand the texts provided by the researcher. She relied on a dictionary and took in-class reading back to her hostel: “I bring to my dorm” (I408) and “I translate in Thai” (I410). When encouraged to do ask questions during the interview, she stated, “never” (I944) and “I don’t like to ask teacher after class” (I948).

5.5.2 Essay argument structure

Introductory paragraph:

Punishment to Children

I disagree to punish children by hitting or violence ways (1. Claim). We have many ways to punish them, so we should select soft ways to punish them first (2. Claim). When children do something wrong, so thire parent should have reasons to punish (3. Claim). Also, They should tell why children do trouble is wrong, and before they punish children, they should ask for resons (4. Claim). Punishment to children by hitting should be illegal (5. Claim).

Rose began her introduction by explicitly stating her position (1). She then substantiated her claim with her reason in sentence two (shown in verbalisation data) (2). However, this sentence did not address why hitting was bad, but simply turned the reader’s attention to a softer alternative. With the inclusion of imperative ‘should’, the second sentence appeared to the reader as another claim. In fact, the whole introductory paragraph appeared as a series of claims. Rose did not recognise that these claims were unsubstantiated and the problem remained undetected (level-one regulation). Rose ended
the paragraph with the statement from Option B. This was her main claim. As it was stated last, it appeared Rose organised her introduction inductively.

Second paragraph:

Children have right to do everything similar to thire parents (6. Claim), “World leaders approved a treaty that sets out the basic human rights of every child” (Durrant, 2007) (7. Ground). Therefore, children have right to do everything that they want to do, and their parent have right to look after them (8. Claim). However, punishment should be suitable for problems (9. Warrant). Their parents should ask them before punish them because their parents have rights control their behaviour (10. Claim).

This paragraph began with another claim (6) supported by data drawn from text C (7). This was followed by a new claim (8) which was not entirely supportable as Rose’s interpretation of human rights appeared over-generalised. Her warrant regarding punishment (9), although commonly accepted, appeared out of nowhere and bore no logical connection to the preceding sentence. Here, Rose introduced ‘human rights’ and ‘punishment’, one after the other, with no clear indication of how the two concepts might be related, and the reader might have to infer that ‘parent have right to look after them’ (8) related to punishment. This connection was made more apparent in the next claim (10). However, this last sentence did not express logical progression as the two clauses did not cohere.

Third paragraph:

Hitting makes children hurt because the children should be afraid their parents (11. Claim). Also, children do not tell problems to their parents (12. Claim). Communicates the message that it’s all right to be aggressive and hit someone if you do not like what they do (Clark & Ireland (1994) (13. Ground). I think their parent do not want to hit children, so they should tech children to improve theriseve (14. Claim). If children do something correct or good, their parents should give good comments (15. Claim). As a result, children will be happy when they recive good comments and they will do something good for comments (16. Ground). Moreover, their parents should be good model for children following (17. Claim).
The third paragraph started with another claim offering justification for hitting, that is, to make children afraid (11). This message appeared to deviate from Rose’s anti-smacking stance and could potentially confuse the reader. The next sentence mentioned a negative result of children being afraid of their parents (12). This was followed by data from Text B. It appeared, in these sentences (11-12), Rose wanted to enumerate negative consequences of hitting. However, without suitable signposting, her intentions seemed lost. Next, Rose addressed the counterargument with a somewhat concessive statement (14). Unfortunately, this too appeared as a new claim as Rose seemed to launch another strong opinion on what parents should do in the second clause. Rose then introduced the concept of positive reinforcement (15-16), presumably in connection to ‘improve theirsevle’ (14). However, the connection was rather weak. ‘As a result’ (16) signalled to the reader that what followed was an illustration of what had been proposed (15). Rose ended this paragraph with another claim.

The fourth paragraph began with two new claims (18&19) supported by data from Text A. This information was misread. Rose appeared to have confused who the speaker was and misused this text segment. Nevertheless, it was suitably placed as an illustration for the claim (19). Next, Rose introduced another concept of good parenting. It was not clear whether she wanted to use this to support ‘positive reinforcement’ as this sentence (21) appeared disconnected from the first half of the paragraph. The rest of the paragraph continued to promote freedom of children (22-24). It appeared Rose had equated ‘freedom’ to ‘human rights’ mentioned in the second paragraph (8), although this was not made explicit. If this was the case, then it would be rather difficult for the reader to make such a connection. The link between the right to do everything and freedom might not have been achieved or sustained due to the distance between the statements (8&22).

**Fourth paragraph:**

Punishments have many ways (18. Claim). We should change hitting to positive ways (19. Claim). According to Judy’s statement, “he noticed you put your toys away without him asking. Making point to let the children know that you notice efforts towards good behavior. (NA, ND) (20. Ground). Their parents should look after them when they needed (21. Claim). We should give freedom them to do everything (22. Claim). If they have problems, parents should help them (23. Claim). Children should learn by themselves (24. Claim).
Conclusion:

I think that violence punishment should be illegal because hitting is a bad way to punish them (25. Claim). Parents love their children, and they do not want to punish them (26. Warrant). Therefore, parents should look after them well (27. Claim). Moreover, parents are a beloved person for their child (28. Warrant). If parents hit them, children feel bad with parents (29. Claim).

In her conclusion, Rose summarised key sentences from earlier paragraphs. She began with her thesis statement (Option B) once stated in the introduction and supported this with the gist of what she had detailed earlier in the third paragraph. In her warrant (26), together with the rest of the conclusion, Rose appealed to the reader emotionally. However, these statements (26-28) did not serve to strengthen her position as they did not contain ideas semantically linked to the topic sentence of this paragraph.

Overall, Rose mainly presented successive claims and occasionally offered supporting evidence. Her essay appeared as a one-sided expression of opinions rather than a convincing argument, and although Rose briefly addressed the counterargument, this was not sufficient to serve as a strong rebuttal.

5.5.3 Microgenetic findings

Rose’s microgenetic findings suggest that her verbalisation during reading was purposeful and effective. Self-questioning appeared to be her key strategy for solving lexical difficulties. She also monitored her comprehension and regularly reiterated the instruction in her own words immediately after reading. During writing, Rose also verbalised constructively. She used self-questioning and self-instruction to plan and organise her writing. Although her planning adhered primarily to the five-paragraph format, Rose managed to include some of the source information in her brainstorm and subsequent writing.

5.5.3.1 Intertextuality

Rose demonstrated her interactive reading behaviour. She actively constructed meaning, made use of context clues and prior knowledge, and monitored her comprehension regularly. She also compared the opinions from the source texts with her own ideas.
Excerpt 1

In Excerpt 1, Rose was about to read the instruction sheet (IS). She set clear goals to read within 10 minutes and to understand the instructions (1). This goal served to orient her reading behaviour (level-five regulation/without external assistance). Rose read aloud and slowed down when she encountered ‘misbehave’ (6). This suggests she monitored her reading. She was able to quickly work out the meaning by guessing from the prefix ‘mis’ meaning no or not or something negative and by activating prior knowledge on the noun ‘behaviour’. Although Rose had not quite understood ‘misbehave’ as behaving badly or unacceptably, she understood enough to continue reading (level-five regulation/without external assistance). Note that Rose used self-questioning (6) as an initial means to work out the meaning and was almost immediately able to problem-solve without having to verbalise the whole process in detail. Next, Rose encountered ‘smack’ and used self-questioning to focus her attention and figure out this word. She then guessed from the text that it means ‘punish’ (9) and made use of the coordinate conjunction ‘or’ that smacking was the same as hitting (10) (level-five regulation/without external assistance). She then agreed with the notion that hitting showed parental love.
As she continued reading, Rose mispronounced ‘discipline’. Again, she used self-questioning and answered that she did not know it (28) (level-two regulation/problem noticed/unsolved). This suggests that she monitored her comprehension. Rose then asked another question (29). She restated the word aloud and guessed it had to do with ‘punish’ (30). Note that she did not think that the two words were exactly the same. At this point, despite not having fully worked out the meaning of ‘discipline’, Rose decided to continue reading.

Excerpt 2

made illegal. I think I choose B. (circled B) because I used to be a child. If you cannot decide you may wait until you have more information in the passages to support your argument. Plan your writing, organize your idea and write a coherent paragraph (underlined ‘coherent’) on what you have decided A or B. I choose B. Make sure you state your position clearly. (underlined ‘clearly’) Give supporting evidence or further information. Think of what whats and how other people may disagree with you (underlined ‘what and how other people may disagree with you’).

Your paragraph should have at least 7 sentences. Write at least 2 drafts. I should write 2 drafts. (underlined ‘2 drafts’) And have at least 7 sentence (underlined 7 sentences) in each paragraph, I think. When you use the information from [your reading in your writing you not copy. OK not to copy (underlined ‘try not to copy’). The words form the passages directly in onto your

In Excerpt 2, based on her childhood experience, Rose opted for Option B, anti-smacking (37-38). She reaffirmed her choice in response to the instructions (45-46). This shows that Rose was not a passive reader. She actively built her understanding while being mindful of her decision. Also, Rose interacted with text by underlining and reiterating in her own words what she considered salient (45, 49, 51, 52, and 54). It appeared Rose was self-regulated and had very little trouble understanding the instructions, although she misinterpreted that each paragraph should contain seven sentences (level-one regulation/problem unnoticed). The number of sentences stipulated was for a paragraph to be completed in 45 minutes.
Excerpt 3

In Excerpt 3, Rose focused on the teacher (researcher) as her audience (62). Rose’s sense of audience at this stage was object-regulated as she simply conveyed to herself what the instruction said. Next, Rose decided to write a paragraph and acknowledged the time limit. However, Rose’s verbalisation showed that she ended up writing an essay, using up the 1½ hours allocated. This was perhaps an instance whereby orientation did not follow through to execution, or her orientation basis had changed. At this point, Rose decided to write an essay but only stated this new goal in her self-reflection form.

Excerpt 4

A Text A Discipline (pronounced this very softly and put brackets over ‘Discipline’). A I don’t know about the meaning. I think I should get from paragraph. A1 If your children is punished, Oh it tells about punish (drew an arrow pointing at ‘punished’) A1 for something he didn’t do, he begins to see punishment as unfair. As unfair Rather than a fair consequence to an appropriate in OK action. OK A1 It gives the child no incentive (boxed up ‘incentive’). What does it mean? Incentive To have no incentive (boxed up the word ‘incentive’) It’s about thinking? (guessing tone) A1 Since he may end up punished whether he is following the rules or not. (underlined ‘rules or not’) A2 Punishment itself is actually the least effective method of discipline. (correct pronunciation) The most positive method is positive Umm re.. reinf. What does it mean? (put brackets over ‘reinforcement’). How to spell it? R-e-i-n Re Reinforcement A2 that is yes that is making a point to is let a child know that you notice efforts towards good behaviour. I think how to tell the child to know what to do right or wrong A2 Letting him ...
In Excerpt 4, Rose read the title of Text A, and acknowledged that she still did not understand ‘discipline’ (67) (level-two regulation/problem noticed/unsolved). She instructed herself to find out from her reading (68). This suggests that she continued to monitor her comprehension, she read with anticipation and her upcoming reading was purposeful. Following this, Rose noted that the paragraph concerned punishment and marked this with an arrow (69). Next, she used self-questioning to help her work out the meaning of ‘incentive’ (73), made a random guess, and tolerated ambiguity (level-two regulation). She continued reading, came across ‘reinforcement,’ and noted the spelling as a means to focus her attention. Next, she guessed from the clue ‘that is…’ (80-81) that ‘incentive’ had to do with teaching a child about good and bad behaviours (82) (level-five regulation/problem solved without external assistance). As she finished Text A, Rose paid close attention to the citation (90).

Next in Excerpt 5, on her subsequent reading of Text A, Rose continued to struggle with the same vocabulary items (level-two regulation/problem noticed/unsolved). She used self-questioning several times (183-184 & 191-192) to help her focus before instructing herself to reread (195). Rose recognised ‘force’ in ‘reinforcement’ and linked this to ‘fight’. She also thought that ‘incentive’ was perhaps ‘progress.’ Although Rose’s guesses were not supportable, they showed how she attempted to self-regulate while reading, drawing on knowledge of word parts and context clues. Understandably, with vocabulary difficulty, Rose acknowledged that her comprehension of this text segment was poor. This meant she was monitoring her reading performance, signifying the control aspect of her action.

**Excerpt 5**

183 minutes. OK ^A(...) Be afraid. ^A2What does re mean? Forcement?  
184 forcement? Fight? Re Retry? ^A2notice efforts towards good  
185 behaviour. Letting him know that he is doing thing well boosts his  
186 confidence in himself and gives him incentive to continue.  
187 (skimmed) Johnny... (skimmed) notice.. I don’t understand well.  
188 ^A1If your child is punished for something he didn’t do, he begins to  
189 see punishment as unfair. OK Unfair 24.16 (underlined ‘unfair’)  
190 ^A1rather than a fair consequence to an inappropriate action. It  
191 gives the child no incentive. What does it mean? Incentive? ^A1To
In Excerpt 6, Rose used self-questioning to work out unknown words. She posed a question then answered it coherently (98-99). This suggests she monitored her comprehension. Next, she did not know ‘a dangling table cloth’ but she noticed ‘a’ in front of ‘dangling’ and knew that this was a noun phrase (100). As she read ‘a dangling tablecloth’, she repeated ‘table’ and ‘cloth’ and guessed from the word parts and came to understand ‘tablecloth’ (101) (level-five regulation/without external assistance). Additionally, Rose bracketed (99) and underlined (100) the unknown words to help her focus, and used an arrow (110) to make salient key information. Although she did not understand ‘temptation’ and ‘dangling,’ she read on, and as she finished Text B, she stated that it agreed with her choice (Option B). Following this, Rose read Text C with no apparent difficulty. She did not understand ‘treaty’ but this did not pose a major comprehension problem, and as shown in the addendum (124-125), she also compared Text C with her own opinion, again marking this with an arrow (125).

Excerpt 6

97 occurring in the first place. It may be impossible for your newly-standing child to ignore a temptation. What does it mean? I don’t know. (put brackets over ‘temptation’) B1of a dangling. Oh this is 99 noun (put ‘n’ for noun and underlined ‘a dangling tablecloth’) But 100 I don’t know the meaning. Dangling table cloth table cloth. OK.

... 

109 unsuccessfully. (underlined ‘unsuccessful’) B2OK, I think it means 110 similar to my opinion. (marked text B with an arrow facing down)

... 

124 (underlined ‘children do have rights’). C1I think text C similar to my 125 opinion (marked text C with an arrow facing down). 15OK, I have

5.5.3.2 Task representation

Rose was able to construct a clear task representation. She took into consideration a five-paragraph format taught in her normal English class and several key sub-concepts
of discourse synthesis taught during the intervention and came up with a comprehensive plan for her essay.

In Excerpt 7, Rose set a goal to finish proofing [planning] and reading [writing] about what she had just read within forty minutes. As she began her brainstorm, she tentatively set her title as ‘punishment to child’ and thought of the audience. Rose wondered whether to write for children or parents and subsequently settled with the latter, as she herself was also as a child. She consciously oriented herself towards the audience by writing down ‘to their parents’. Next, having consulted the instructions, Rose wrote her thesis statement. She used self-questioning to think critically about the topic. She then began to generate ideas and recalled seeing some useful information on child rights. Essentially, Rose was able to construct a clear task representation (level-five regulation/without external assistance). She set the time to complete the task (126), decided on the title (provisional) (129), and thought of audience (129-131). She focused on her thesis statement (134-135), engaged in logical thinking (135-136), and generated ideas (135-138). She also intended to include evidence: “OK 2 reasons” and “I have seen it the rights of children” (138-141). She monitored her brainstorm (142-143). At this point, Rose had not thought of using the other two source texts and appeared to have based her ideas mainly on her knowledge and experience.

Excerpt 7

125 opinion (marked text C with an arrow facing down). ISOK, I have forty minutes proofing and reading about this text’s about ah punish (wrote ‘punish’ on top of the source text sheet). OK BS(on a blank sheet drew a mind map to plan her writing, first she drew a circle and wrote in it ‘punishment to child’). OK who is my reader? Children or their parents? I think their parents – to their parents. (wrote ‘to their parents’ in the circle) because I I’m a child .. too right? (reread the options on the instruction sheet) I think ISsmacking children is a form of violence and should be made illegal. OK, my thesis statement. BS//Smacking children is a form of// “violence and should be made illegal” And why illegal? And why violence? I think BS“hitting .. hurt”. Yes, a child are hurt from hitting. I think a child afraid their parents when they hit. //children afraid their parents//. OK, 2 reasons. Umm From the text I think I
The second half of Excerpt 7 shows Rose transferring ideas from her brainstorm onto her first draft (D1). She reflected briefly on the topic before writing it down (144). She then set a goal to finish the draft in 10 minutes (147) and wrote a thesis statement (148-149). She planned to write three body paragraphs (B1, B2 and B3). She left several lines for each section and planned to include information from text C. It appeared Rose adhered to the five-paragraph format she had learnt and was methodical about how to structure her essay. At this point, although the draft looked different from the brainstorm, the two documents essentially contained the same information. This meant that Rose was following through with her initial orientation (level-five regulation/without external assistance).

5.5.3.3 Logic, coherence, and revision

Rose’s regulation was discerned from how she made use of the source information, how she developed her argument, and how she revised her work.

In Excerpt 8, Rose drew information from Text C and included her interpretation of human rights of children. Next, she acknowledged that the source agreed with her thinking (158-159), and considered the best way to appropriate the source texts (160-
indicating her awareness of different forms of citation. She then settled with quoting verbatim and gave credit to the author (165). A mistake was made as Rose wrote down the author’s initials and not the surname. It seemed Rose was not monitoring her citation and did not notice the mistake (level-one regulation/problem unnoticed). Next, Rose moved to her second point about physical pain inflicted on children (168). Once more, she thought of citation (170) and conceded that this information was not from an official source (171). Here, Rose demonstrated her theoretical understanding that academic writing required ideas to be substantiated by information from valid sources.

**Excerpt 8**

In Excerpt 9, Rose was able to abstract the idea of using a message to teach children. Overall, Rose performed multiple operations during her execution of this first draft. That is, while she understood that hitting communicated a negative message of condoning aggression, she also understood that what adults said or did could carry powerful messages to children (175). Here, Rose managed to conceptualise using a message to guide children’s behaviour, and immediately acknowledged where the idea came from (176). She also monitored her draft and was happy that ‘use message to tell’ was an appropriate synonym for ‘communicate the message’ (179-180). The ability to abstract and transform what she read and to use this for a new rhetorical purpose essentially pointed to level-five regulation (without external assistance) with regard to
discourse synthesis, that is, Rose was able to use reading as a psychological tool to generate her own sentences. She cited the source appropriately (181) and became mindful of the time (182). Here Rose stated the original forty-five minutes allocated for paragraph completion, but she in fact was thinking of a new goal which was to write an essay within 1 ½ hours. Rose did not articulate her new goal but the five-paragraph format for her essay was evident in her planning. She also wrote in her self-reflection form that “I change my mind to essay because this way it is easy to reder [sic] to understand”.

Excerpt 9

Next, Excerpt 10 shows Rose’s self-questioning (205-206) as she sought to understand the second half of paragraph two of Text A. She was able to reiterate in her own words what she read and applied this meaningfully (208) (level-five regulation/without external assistance). She managed to integrate the source information and rationalised its application in her writing (210-213). The use of source text in this instance, while appearing simple, was somewhat sophisticated. Rose not only managed to draw on the source texts but she also succeeded in integrating her own idea and the source information to form a single meaningful sentence. Rose’s synthesis indicated level-five regulation (without external assistance). Next, she thought of citation (216). She then wondered how best to quote Text A (219) and decided to use ‘According to’ as a lead in for a verbatim quote (221). Although Rose monitored her writing and made a valid decision about personal and possessive pronouns (223), her text mining was not adequately controlled as she misunderstood the source and presented Jonny as the speaker rather than the person addressed in the statement (level-one regulation/problem unnoticed).
In Excerpt 11, Rose was thinking of possible counterarguments from her audience (226-227). She visualised a conversation partner who might respond to her writing (228-229). She used dialogic thinking to gauge readers’ reaction that hitting induced fear and therefore was useful as a deterrent to unwanted behaviour (230). She indicated that she agreed that hitting made children afraid but she also thought of how to overturn this claim (231-232). She explicitly stated that she would add more information (231) and did so by showing the negative effects of fear. That is, fear caused children not to share their problems, effectively alienating children and parents (232-236). Conversely, if children shared their problems with parents, it was possible that parents might react by either being angry and hitting, or complaining, or helping (238-240). Here, Rose was able to mentally and verbally rehearse and assess possible ramifications of hitting. Rose’s meaningful response to this potential counterargument indicated level-five regulation (without external assistance).
The second half of Excerpt 11 shows Rose thinking critically about the human rights of children and the fact that children were young and dependent (244-245). She tried to generalise what it meant for children to have rights (245-246). This demonstrated that Rose was able to identify essential information from her reading. Although Rose recognised that children have rights, she also thought parents had the right to punish children as commonly seen in Thai households. Her question (250-251) indicated Rose could not comprehend the concept that parents had no right to hit children. It did not occur to Rose that hitting would violate the human rights of children. Here, Rose struggled with
a concept unsupportable from the Thai cultural standpoint (level-two regulation/problem noticed/unsolved). Failing to make explicit this concept, Rose instructed herself to reread.

In Excerpt 12, Rose continued to use self-questioning in her quest to understand Text C (257-258). She reread Text C without much progress and decided to scan her first draft (263).

Excerpt 12

and Cl(....) children are small and dependent, adults often do not consider to be full human beings with rights. What this text tell me? Tell me why... CAll people have rights. These rights apply to everyone regardless of race, colour, gender, language, religion, opinions, origins, wealth, birth status and ability. Not only adults have human rights, children have rights too. But because children are small and dependent, adults often do not consider them to be full humans. (leaned back and scanned D1) Umm.. I think my supporting is not enough. What I want to do? To do. (started writing adding to B1) D1 “Their parents have right to look after them, but” but .. look after and punish them and punish them, but

267 ...why? Why? D1(.....) Text A .. OK. Text C have right .. umm.. C(....) text C have right. Why have right? Their parent choose punish them by hitting is a good or not? “but their parent should punish them umm in suitable.” OK. D1“Have right.” And if their parents tell me the children have right and their parent have right to punish them. Umm I think it’s ah suitable for problems or ah punishment with troubles. “Their parent must have” reason, more “have reason to punish them.” OK.

In the second half of Excerpt 12 above, Rose thought more supporting information was required. However, as she still struggled with the concept smacking being against children’s human rights of children (267), she was unable to draw any more information from Text C (level-two regulation/problem noticed/unsolved). At this point, Rose debated whether hitting was warranted (269) and conceded that child punishment should be reasonable and case-sensitive (270). Overall, Rose actively engaged with Text C and attempted to abstract and rationalise the source information.
Excerpt 13

In Excerpt 13, Rose used verbalisation to think critically, clarify her ideas, and justify her moves (277, 280-282). Essentially, she sought to monitor her thinking and writing, and appeared satisfied with her logic (286-288).

Excerpt 14

In Excerpt 14, Rose was copying from her first draft (D1) to her second draft (D2). She was mindful of the time constraint (295). As she rewrote, she acknowledged the source. She also spotted her earlier citation mistake ‘J. E. 2007’ (165-166 in Excerpt 8) and changed this to ‘Durrant, 2007’ (297). This indicated the control aspect of her action was at work and meant that Rose progressed from level-one (problem unnoticed) to level-five regulation (problem solved without external assistance).

In Excerpt 15, Rose used verbalisation to help rationalise her ideas (308) and check on coherence. She was happy that she had repeated ‘right’ several times to create lexical cohesion (311-312) (level-five regulation).
In Excerpt 16, Rose continued with her second draft (D2). She reread Text B (¶1) but was unable to make use of this information as she still could not understand ‘temptation’ and ‘dangling’ (325) (level-two regulation/problem noticed/unsolved). She instructed herself to ‘change’ (325) which meant to work on other information (M). She used self-questioning to focus on text-mining and located a suitable text segment (second sentence/second paragraph/Text B) and intended to paraphrase this. Next, she copied the sentence onto her second draft, making a single change with regard to the tense from present continuous (what they are doing) to present simple (what they do) (329). She then acknowledged the source. Rose’s textual borrowing behaviour indicated her underdeveloped paraphrasing skill. Although she wanted to paraphrase, she ended up quoting verbatim. Additionally, Rose empathised with parents and used ‘we’ in her verbalisation (330-332). By thinking as a parent, she was able to generate more ideas with regard to positive comments. Rose’s self-questioning led to her logical development of ideas (337-340). She wondered if she should elaborate further but was unable to think of anything suitable. She appeared to be frustrated and repeatedly asked “Why?” (346). Next, she closed this paragraph by adding another sentence on parents being good models for children. She also focused on providing more supporting information (348) and set a specific goal to recheck her writing (350) and was happy with what she had written (351).

Excerpt 16

place. It may be impossible for your newly-standing child to ignore the temptation of a dangling table. (sighed) B(...) 5.13 Change. Where? BWhat do they do? (...) BIt’s communication. If I paraphrase this sentence? OK D2 “Communicates the message that it’s all right to be aggressive and hit someone if you do not like
In Excerpt 17 below, Rose checked her second draft and detected some discrepancies and resolved these successfully (level-five regulation). Earlier as she wrote her second draft, she had inadvertently combined paragraph 2 and paragraph 3 of her first draft as she transferred them onto her second draft. She then crossed out a segment from draft one (354-356) and continued with her second draft. She considered citing Text A (360), but misunderstood the statement and thought Judy was a man (pronoun ‘he’) (364-365). Also, Rose was not able to generalise the concept of positive discipline (366). Note that she focused on positive punishment and not positive discipline. As ‘punishment’ was not interchangeable with ‘discipline’, quoting from Text A did not answer Rose’s question of how to punish positively (level-two regulation/problem noticed/unsolved). Unable to pursue this any further, Rose then ended her paragraph with additional ideas on allowing children freedom to express themselves while parents stood by to offer assistance when required (369-371). This information, however, did not follow from positive reinforcement cited earlier which meant her argument was not developed logically.
Next in Excerpt 18, Rose was able to consider ‘backing’ at verbal level without relying on the Toulmin’s model (material level). She then continued to use self-questioning to help her think critically. For her conclusion, she decided to summarise her key points from the body of her essay. She restated her anti-smacking thesis. Although her supporting statement for her claim was somewhat weak (375-377), she provided backing for this (378-382) and appeared happy with her writing.

Excerpt 18

“Children should learn by themself.” OK. .. My backing. D1 D2/ I think that violence/“punishment should be illegal.” Why should be illegal? “Because” (looked at page 1 of D2) Why? Summarize instead (page 1 of D2....) D2Because hitting is bad ways (deleted ‘s’) to punish them.” Umm D2.... D1D2Punish them. “Punish is bad way to punish them” And why? .... Why? (looked at page 1 of D2) Read again. OK. D2Parents love their
In Excerpt 19, Rose had just finished her second draft and was checking her writing with the Toulmin model (TM) (object-regulation). She read the introduction and appeared pleased with her claim and data (389-394). Next, she considered her warrant (394) and thought she had met the criteria by appealing to universal parental love (395). She then shifted her focus to rebuttal (396) and appeared to skim read the TM as she misread a number of words (396-398). She then digressed and engaged herself in additional scenario not relevant to her writing (403-404). She proposed parents could write to children (404). This is not appropriate in Thai culture in which oral language takes priority over written language. Rose admitted that she had chosen an unreasonable solution (M). Rose then checked for ‘backing’ and was satisfied that she had use all three
source texts to support her argument (405). She read the definition of ‘qualifier’ on the TM, but she did not look for qualifiers in her essay. She was then ready to consult the Coherence SCOBA (CS).

Excerpt 20

...  

In Excerpt 20, despite her reliance on the SCOBA which indicated object-regulation, Rose appeared confident in her application. As she consulted CS, she glanced
at her essay and moved relatively fast through her text (408-415). She checked several pronoun references for clarity and not merely to confirm their locations (421-425). Rose, as her first reader, had spotted some ambiguity and solved the problem successfully. She then hurried through her work (432-440, data omitted). She read a question from the SCOBA and answered it immediately without checking her writing (442). Rose also misunderstood ‘old information’ and referred to this as her prior knowledge (444-445) and not the connection between paragraphs (level-one regulation/problem unnoticed) whereby old information was revisited or extended to create a smooth transition from how one paragraph ended and the next began.

In summary, Rose understood the instructions. However, she began brainstorming and drafting without fully understanding the source texts. Despite this, Rose had achieved a reasonably strong orientation basis for her writing and produced a good brainstorm. Her verbalisation showed that a significant portion of text became clear after rereading. This occurred mainly after she had begun her first draft and actively sought to substantiate her ideas, during which time she effectively used self-questioning and self-instruction for self-regulatory purposes. In addition, Rose’s reference to the Toulmin’s model while writing showed her understanding of the argument system with her audience in mind. Despite this, her revision mainly involved reading back what she has written. And although Rose had brought out both the Toulmin’s model (TM) and the Coherence SCOBA (CS) toward the end of her writing, neither had been consulted comprehensively. There was no real modification made to her draft apart from some minor spelling corrections for a couple of words. Moreover, text segments which were not well-understood were either left out or misrepresented.

5.5.4 Developmental changes

In her additional information provided during member-checking, Rose stated that her writing had improved in the area of organisation: “During the project I was stimulated to think systematically. I organised and prioritised the content that I would write” and “Following the intervention, I have more detailed and clearer planning. I consider the outline and align this according to the purpose of that particular piece of writing. Also [I] am able to use clear and correct sentence structure and vocabulary more effectively and according to my purposes” (M/RT). Setting clear writing purposes was a new concept which led her to see writing in a new light and to plan her writing accordingly: “Also, for
my new writing tasks, to increase my confidence, I will use planning before I begin writing” (M/RT).

Also, Rose developed theoretical understanding of discourse synthesis: “Writing from sources requires a consideration in terms of accuracy and coherence of the information which must correspond to the topic” (M/RT). Additionally, Her uses of the source texts, shown in the microgenetic analysis, indicated her understanding of the concept of discourse synthesis, particularly the use of academic reference to add credential to her statements. This was evidence of microgenetic development. Prior to the intervention, Rose reported not having been taught this concept. Although report writing was part of her course requirements, in-text citation was not emphasised and references to source texts were shown only in the bibliography. Following the intervention, Rose recognised the requirement not to base her writing on personal experience and came to understand the important role of supporting evidence, drawn from multiple texts, in substantiating claims in argument writing: “To write academically, [I] must be able to give correct and credible scholarly information and create a piece of writing which aims to inform and educate those who study this work” (M/RT). She could describe the concepts of plagiarism and citations: “The citation must come from credible sources. Furthermore, other people can also make use and cite our work” (M/RT). Having gained a scientific concept of discourse synthesis, Rose’s applied her new knowledge in her normal writing class: “During the intervention, to increase my grade I have applied techniques from the research project and used these with the writing I had to submit to my class teacher” (M/RT).

Despite describing improvement in various areas, Rose’s beliefs about the text as a source of knowledge and writers as controllers of knowledge did not change much. She stated, “Writing is a means to communicate knowledge to those who study the text and writing presupposes the right knowledge of the writer. Therefore, the writer must seek to constantly develop their knowledge in order to produce quality written work” (M/RT). She maintained the view that, once written, knowledge was static, imparted from the writer’s mind, embedded in the textual content, and ready to be extracted by the reader. The important role of the writer was further emphasised as Rose thought it was the writer’s responsibility to avoid producing ambiguous text. She explained, “English writing is important because it means using your linguistic ability to create a piece of scholarly work and because writing can carry multiple meanings” (M/RT). Valuing the
important role of the writer, Rose further described her perceived development: “My participation in this project enabled me to study how to write succinctly” (M/RT). She also acknowledged the benefit of the concept-based approach and the usefulness of learning materials provided during the intervention. Comparing STI with sample orienting tools to learning through silent reading from textbooks, Rose observed: “there were examples which helped me understand much more quickly than learning from reading which I had to summarise by myself. [Prior to the intervention] while I read, if I didn’t understand I had to reread and despite rereading I still didn’t understand” (M/RT).

During the semi-structured interview, Rose explained how reading and writing were linked: “I think if I want to be a good at writing, I should reading before. Because I have ur experience about the text or details and I have a pattern in the sentence and I adapt for my writing” (I252-254). Rose also valued verbalisation during reading: “I want to sound it out because I concentrate” (I301), “I don’t understand I repeat repeat repeat and and ask myself what’s it mean” (I503), and “I ask really loud because I am in my room” (I513). Verbalisation helped improve comprehension: “Sometimes I don’t understand something I should speak out” (I517). Unfortunately, Rose thought verbalisation was only useful when she was alone: “If I’m in public I can’t speak loudly” (I527). It did not occur to her that with practice verbalisation could become her soundless mental tool.

Another area of development is goal-setting. Interview data revealed that prior to the intervention Rose did not have any particular plan for her learning and simply went from one day to the next. She stated, “I don’t have my plan. I think I I start today and tomorrow and tomorrow” (I148-149). Following the intervention, Rose adopted a more strategic approach to learning: “Now I think I should have plan for my life and my English skills” (I153). “Because I I think if you have plan my skills improve more because I list urr things what I can do and improve myself” (I157-158), and “because this course have a how how to plan before you do something and when I do I write my essay I have outline I think my ur when I do something I should have my plan or mind-mapping” (I163-165). She also set reading goals: “I think if I have purpose, I can find something that I want I expect to find it and I I don’t read whole paragraph and I can scan and keep keyword that I want to.....to find” (I365-366).
5.6 Summary

Using the case study design, I have presented an account of participants’ reading and writing difficulties, examined their essays, and explored how five Thai tertiary students self-regulated and appropriated the concepts of discourse synthesis, argumentation and textual coherence. I have also outlined their developmental changes subsequent to the intervention. In the next chapter, I will summarise and discuss key findings in relation to the research questions and in light of previous studies relevant to the present inquiry. I will also discuss the pedagogical implications and contributions of this thesis before presenting my recommendations for further research.
CHAPTER SIX
DISCUSSION AND CONCLUSION

This chapter begins with a summary of major findings. Next, key findings are presented in relation to their respective research questions before being discussed in light of key perspectives addressed in the literature review. This is followed by pedagogical implications. Next, the methodological and theoretical contributions made by this thesis are outlined. After this, the limitations of the study and recommendations for future research are addressed, and finally, the conclusion for the study is provided.

6.1 Summary of major findings

The primary focus of this study was the role of semiotic mediation in L2 writing development. More specifically, this research examined the role of speech and learning materials in mediating participants’ conceptual development of discourse synthesis, argumentation, and textual coherence. To gain insights into the self-regulatory processes aided by speech and concept-based instructional materials, verbalisation and textual data of 5 participants completing a reading-to-write task were analysed. Data from the semi-structured interview, questionnaires, self-reflection form, and classroom-based artefacts also contributed to research findings.

Findings showed that prior to the intervention the participants had limited understanding of reading, writing and argumentative reading-to-write as social processes. Despite their lack of prior knowledge and several reading and writing difficulties, the participants responded positively to concept-based instruction and made effective use of self-directed speech for self-regulatory purposes and demonstrated improvement in several areas. Findings revealed that while the participants wrote in narrative style and used spoken language, there was evidence that they better understood argument rhetoric. Other key developmental gains were increased understanding of discourse synthesis and the reciprocal reading-writing connection, understanding of strategy as a scientific concept, and self-regulation particularly goal-setting. More specifically, participants
benefited from verbalisation instruction and were able to apply self-directed speech effectively during task.

6.2 Research questions and major findings

This study investigated four research questions. The first question sought to understand participants as readers and writers of English. The second question examined participants’ argumentative essays, based on the Toulmin’s perspective. The third questions probed into participants’ self-regulatory processes and unfolding cognitive functions, of which the main data source was verbalisation during discourse synthesis. The fourth and final question explored developmental changes based on data from participants’ verbalisation, self-reflection form, interview data, personal information questionnaire and data from their written understanding of strategies and tool evaluation. In what follows, I briefly present findings in relation to the research questions before discussing these findings in light of previous studies in the next section.

RQ 1: How do participants describe themselves as readers and writers of English?

Most participants described themselves as unskilled readers and writers. They lacked clear reading and writing goals, had little understanding of reading and writing as social processes, and worried about grammar and vocabulary. They also found it difficult to organise their writing and generate their ideas.

RQ 2: How do participants construct their argument essay?

The findings show that while most participants incorporated the Toulmin’s model (TM) in their argumentation, not everybody used the TM in the same manner. Although the participants developed conceptual understanding of textual coherence and argument rhetoric to a certain degree, argument texts written by five participants were characterised by unclear organisation and insufficient evidence to support their main arguments. Despite their understanding of the TM, most participants were not able to clearly state their claims and often lacked a clear or single topic. Some participants drew mainly on their experience, rather than the source texts, to support their argument. In addition, they mainly wrote in a narrative style, reporting or describing events or topics rather than critically discussing them. At times, they also delved into giving extensive details on some issues while neglecting to adequately elaborate on others.
RQ 3: How do participants self-regulate as they interact with text and task during discourse synthesis?

The findings show that during the reading-to-write task all participants used verbalisation purposefully and regularly. They used self-questioning and self-instruction to self-regulate as they consulted multiple source texts, lecture notes, SCOBAs, etc., during reading, planning, writing, rereading, rewriting, and revising.

Overall, the findings indicate that learners can benefit from verbalisation training which aids cognition and self-regulation. The findings show that self-regulation emerged as all participants, assisted with the material support of the task prompt and the source texts, used verbalisation to regulate themselves in three major areas: intertextuality; task representation; and coherence, logic, and revision.

Intertextuality was evident as most participants used verbalisation to set reading goals and make connections between the task, text, reader and writer. The participants used self-directed speech in searching for evidence to support arguments. Participants also used self-questioning and self-instruction to help them interpret the task and create their task representation. Chubby, Mathew, and Rose were able to plan systematically by verbally representing the task, and this affected their planning and writing.

Task representation is the key element in orientation. It focuses and directs self-regulatory actions and is a basis for monitoring progress. In contrast to less self-regulated participants, such as Aoddy and Aum, who did not clearly verbalise a task representation and appeared to switch from one task to the next, highly self-regulated learners like Chubby, Mathew, and Rose tended to construct more a comprehensive orientation basis, carry out actions as oriented, and monitor their actions and comprehension more frequently.

The participants also demonstrated regulation over coherence, logic and revision to varying degrees. They accounted for the challenges they faced, justified their reasoning to themselves and their readers, recalled specific pieces of information in the source texts, attempted to manipulate the information logically and wrote coherently. Self-regulated participants like Chubby, Mathew and Rose were able to deal with these tasks more constructively and logically. All participants demonstrated object-regulated superficial
RQ 4: What do the participants perceive themselves to have learned during concept-based instruction?

The findings show developmental changes in the learning actions of all participants. All participants reported that they made progress toward their goals, gained reading-to-write skills, and developed theoretical understanding of key concepts presented during the intervention. Additionally, although not part of their initial learning goals, all participants gained a better understanding of the term ‘strategy’ and ceased to think of strategies as magic tricks.

One of the developmental paths shared by all participants was their increased understanding of goal-setting. As reported during the semi-structured interview, the lack of goal setting experience prior to the intervention was largely shaped by the teacher-directed nature of Thai classrooms. Following the intervention, participants became more aware of the benefits of goal-setting while participating in several activities designed specifically to enhance learning experience with regard to goal formulation and adjustment.

6.3 Discussion

This section discusses key issues as stated in the research questions, namely, participants as readers and writers of English, argumentation, self-regulation, and developmental changes in relation to previous studies.

6.3.1 Participants as readers and writers of English

The findings show that, before the intervention, most participants found English reading and writing difficult, did not understand reading and writing as social processes, and often lacked reading and writing goals. Mathew and Chubby read outside class for pleasure, whereas Aum, Aoddy, and Rose only read for studying purposes, with their reading goals set by the teacher. Most participants read to understand every word. They could not infer and focused on surface meaning. They read slowly, stopped often, relied on a dictionary, and had difficulty understanding complex sentence structures. As writers,
most participants worried about grammar and vocabulary, often wrote from memory, and used spoken language forms. They reported lacking rhetorical knowledge of how to organise their writing and to write succinctly.

Similar reading difficulties have been reported in previous Thai EFL studies. The findings that most participants read very little outside class and focused on vocabulary and grammar are consistent with findings reported in the literature (Akkakoson, 2011; Kirin & Wasanasomsithi, 2010; Strauss, 2008). Piyanukool (2001) found most of his 126 participants read slowly, attended to every word, stopped to use a dictionary often, and rarely focused on main ideas.

The findings on writing difficulties, particularly regarding the focus on grammar, in the current study run parallel to the findings reported by Dhanarattigannon (2008) whose participants also believed their lack of vocabulary and grammar knowledge was their major shortcoming. Consequently, these students did not respond positively to writing instruction that did not emphasise grammatical accuracy, which prevented them from using writing strategies effectively. As a result, their essays were not well-organised and their arguments under-developed. Kaewnuch (2008) described Thai EFL student writers as academically disoriented and socioculturally uninformed and found that even English-major students were unskilled in organising their essays. Kaewnuch’s participants wrote from memory following a narrative style, with little evidence of critical thinking or effective planning. Similarly, Phuwichit (2004) found that essays written by Thai EFL students were characterised by the use of spoken language and chronological organisation.

As the above studies found, oral narrative patterns are characteristic of some Thai student writing. Because oral narrative is a dominant form of communication in Thai society, Thai student writing appears to be mediated by “culturally constructed artifacts, concepts and activities” (Lantolf & Thorne, 2006, p. 79) in the Thai context. This is also true of the participants in this study and reinforces Vygotsky’s (1978) contention that, “any learning a child encounters in school always has a previous history” (p. 84), and Leont’ev’s (1981) assertion that “society produces the activity of the individuals it forms” (p. 48). As narrative writing is the defining characteristic of text production activity at school, students write as if they are recounting their experiences, that is, in the same fashion they speak and tell stories.
6.3.2 Argumentation

Three major findings emerged from analysis: participants used the Toulmin’s model (TM) differently, most participants based their essays on prior knowledge rather than the source texts, and their arguments were not well-developed.

First, the findings reveal that while most participants applied the TM in their writing, they used it at different times and with different outcomes. The findings show that deliberate inclusion of the TM is as a mental tool that helps restructure thought processes, and indicate that implementing the TM earlier in the activity enhances self-regulatory behaviour during argumentative reading-to-write more effectively than end-of-activity inclusion.

The findings show that Mathew did not use the TM at all, while Aoddy made several attempts but was unable to use it constructively. Whereas Chubby used the TM early during her pre-writing stage, Aum and Rose used the TM much later in their writing activity. The findings show that the differences between how Aum and Rose made use of the TM from how it was applied by Chubby was apparent. Aum and Rose referred to the TM towards the end of their writing activity, but they did not demonstrate prolonged attention to applying it. Rose focused on the five-paragraph format and her brainstorm, which did not include the TM, while Aum did little planning or structuring of her argument. That is, they were not “acting in conjunction of mediational means” (Wertsch, 1991b, p. 33, italics in original). Neither Rose nor Aum appeared to use the TM as a mental tool, nor did their writing reflect it. Chubby, on the other hand, deliberately incorporated the Toulmin elements in the structure of her brainstorm and consciously used these elements to guide her content generation and writing. Vygotsky (1987) asserts that “change in the functional structure of consciousness is the main and central content of the entire process of mental development” (p. 188). This study shows that students who adopted the TM for their planning showed positive changes in their writing. This finding seems to echo other researchers’ view that the Toulmin system is suitable for instruction which aims to improve learners’ understanding and use of rhetorical organisation (Crammond, 1998; Saito, 2011; Yeh, 1998).

Second, the findings indicate that, despite their increased understanding of argument rhetoric, most participants could write to present their argument based on
subject familiarity and personal experience, but had difficulty recognising and incorporating counterargument. These findings are consistent with findings by Lo (2011), whose Taiwanese participants demonstrated little evidence of critical thinking, particularly in addressing cause-effect relations and opposing viewpoints.

The findings also reveal that some participants, for instance, Aum and Rose, relied on their background knowledge, only occasionally returning to the source texts for a cursory examination as they briefly searched the texts for possible supporting information. As suggested by Basham et al. (1993) in their work on discourse synthesis orientation patterns, writers may be topic-oriented (write mainly from prior knowledge on the topic), text-oriented (rely heavily on text rather than own ideas) or task-oriented (highly depend on instruction). In this study, Aum and Rose demonstrated topic-oriented behaviour, that is, they drew on their anecdotal and sociocultural knowledge on the topic rather than the source texts. Aoddy was text-oriented as he relied heavily on the source texts for his content, and task-oriented as he often returned to the instruction. Chubby and Mathew, on the other hand, meaningfully considered and successfully applied the instruction, the source texts and their prior knowledge, and demonstrated task-oriented, text-oriented, and topic-oriented behaviours almost equally.

Third, the findings also show that most participants failed to engage in complex argumentative discourse. This is not surprising as the complexity of argumentation rhetoric usually places high demands on learners’ thinking and organisational abilities (Hyland, 2003; Wolfersberger, 2007). The main challenge could stem from their lack of guided practice in argument writing. Even though the Toulmin’s model had been successfully taught, the intervention was short. The participants, therefore, adopted a knowledge-telling approach (Bereiter & Scardamalia, 1987). Their reliance on oral language and past experience may also have contributed to difficulty in expressing their ideas and addressing counterarguments. These findings run parallel to the finding reported by Qin and Karabacak (2010) that Chinese EFL essays lacked clearly stated claims and counterarguments. However, Qin and Karabacak did not include instruction on the Toulmin’s model. Similarities in the findings, nevertheless, indicate that while participants in the present study gained better understanding of argumentative rhetoric following the intervention, more practice and possibly more instruction were needed.
One explanation could be the fact that Thai students lack verbal argumentative experiences. Bereiter and Scardamalia, (1987) suggest oral argumentative skills of English native speaking students may be drawn upon to support their written argument. Thai students rarely engage in critical discussion and tend to generally avoid confrontation (Srinon, 2009). Due to the cultural norm of social harmony (Dhanarattigannon, 2008), Thai learners may lack conversational argumentative insights which would otherwise form the basis of their written expression. Vygotsky’s (1978) genetic law states: “Every function in the child’s cultural development appears twice: first, on the social level, and later on the individual level; first, between people (interpsychological), and then inside the child (intrapsychological)” (p. 57). The apparent lack of argumentation on the social plane in the Thai writing practice and Thai communication in general may explain why Thai students are unskilled in presenting their opinions and acknowledging opposing viewpoints.

That L1 literacy practice becomes L2 writing resources, particularly in argument writing, was also reported by Uysal (2012), who found that Turkish EFL writing drew on their L1 argument approach, characterised by assertiveness and acknowledgement of contrasting views. Despite not having been trained to use the Toulmin’s model, Uysal’s participants were able to address rebuttals effectively. Unlike Turkish learners, Thai students are expected to be polite and obedient, and arguing for their viewpoints has not been fostered as part of their childhood or academic experience. This may impede their ability to skilfully express their opinions, acknowledge those of others, and prioritise different aspects of argument. Without being exposed to such social practice or being permitted to negotiate their position in society from a younger age and through schooling, learners cannot be expected to develop their conceptual understanding of argumentation independently of social interaction (Vygotsky, 1978). Without sufficient prior argumentative skills and strategies, students may find it difficult to conceptualise a well-formed argument. Their ill-formed proposition is then further undermined by their insufficient linguistic resources.

From a Gal’perin’s (1969) concept formation perspective, learners need to undergo the process of systematic orientation through explicit modelling and verbalisation of the argument concept. Considering the Thai context from this perspective, it is not difficult to infer that, without a real experiential action and minimal
orientation basis, Thai EFL learners struggle to conceptualise argumentation at the level of mental thinking. Without providing learners with a concrete scheme of argument rhetoric in terms of actual experience and materialisation, it is a challenge to expect Thai learners to excel in superior verbal thinking where argumentation is concerned. In this study, the differences in argumentation among the participants, who had some practice and a concrete scheme to follow, is evidence of the challenge.

6.3.3 Self-regulation

Self-regulation is marked by “the shift from the intermental to the intramental plane” in the individual’s ability to control and influence his/her behaviour and that of others (Lantolf & Appel, 1994, p. 11). In this study, self-regulation was evident in participants’ control of self and task, that is, they demonstrated higher mental functions and used language, more specifically self-questioning and self-instruction, to regulate cognitive functions while writing from sources. And although the participants appeared regulated to varying degrees in different task aspects as shown in the discussion below, they all demonstrated self-regulation one way or another.

These findings are consistent with those reported in a growing body of research showing that the way learners verbalise shapes their learning behaviour. Concept-based studies by Holunga (1994), Negueruela (2003), Garcia, (2012), and Frazier (2013) have found verbalisation crucial to theoretical understanding of conceptual knowledge and showed that verbalisation mediated conceptual development as participants verbally negotiated and regulated their thinking in response task demands. These scholars contend that verbalisation constitutes a substantial reservoir of potential knowledge which could come into being through internalisation and externalisation of concepts.

In Section 3.8.2.4 in the methodology (pp. 105-106), I proposed examining self-regulation according to three task dimensions: intertextuality; task representation; and logic, coherence, and revision. In the following subsections, I discuss findings on these three dimensions of participants’ self-regulation in relation to previous studies.

6.3.3.1 Intertextuality

Self-regulation with regard to intertextuality was dependent upon participants’ understanding of not only the content of each source material but also the complex
relationships between the sources. They needed to be able to see how various pieces of information related to one another and how these could be used in their own writing. Most participants demonstrated regulation in this area. As they read, they understood that they should interact with text and not passively consume the text or simply read to understand the words in print. For instance, Chubby (Excerpt 4, p. 196) connected several pieces of information from different source texts, Mathew (Excerpt 2, p. 220) and Aum (Excerpt 5, p. 176) made conceptual links across all three source texts, and Rose (Excerpt 6, p. 248) compared the viewpoints from the source texts with her own opinion. Aoddy’s futile attempt to relate Text B to Text A (Excerpt 7, p. 150), on the other hand, demonstrated little regulation over intertextuality.

The findings show that self-regulated participants read not only to construct meaning but also to determine how the source texts could be used in their writing. This was evident in Chubby’s data. Chubby read and took notes according to her brainstorm. She also decided very early in her writing activity to integrate source information primarily to support her claims (Excerpts 6 & 7, pp. 198-199). In contrast, less self-regulated participants interacted less frequently and less meaningfully with the source materials. They read predominantly to understand the content but did not abstract or make use of the information. Aoddy, for instance, was not able to understand most of what he read. He did not understand the task prompt well enough to create a meaningful task representation. His reading of the source texts was also plagued with vocabulary difficulties, comprehension breakdowns and text abandonment (Excerpt 3 p. 147 & Excerpt 7, p. 150). Consequently, Aoddy resorted to copying the source texts. This finding was consistent with Campbell’s (1990) and Li and Casanave’s (2012) observation that unskilled writers with little knowledge of reading-to-write and insufficient understanding of source texts tend to use copying and cut-and-paste job as their strategies. The findings also show that, despite relatively good comprehension, less regulated participants were not able to see how useful information might have fit into their own writing. Aum, for instance, appeared to have understood most of the source information. Nonetheless, her writing lacked evidence of textual borrowing with correct citation.

Lack of textual borrowing self-regulation was evident in Aum’s writing. Aum stated in verbalisation that she needed the sources (Excerpt 8, p. 179 & Excerpt 11 p.181). Unfortunately, in her essay, the source materials were used without quotation marks and
no citation given. Member-checking revealed that citation was not stipulated in the task prompt which only asked participants not to copy and if they copied they should put the information in quotation marks. Aum’s writing showed some of her sentences were based on the source texts but Aum thought she had substantially paraphrased it and did not think it was necessary to cite the source as she did not quote verbatim. This finding is consistent with Shi’s (2004) and Wolfersberger’s (2007) observation that failure to cite the source texts does not necessarily indicate intention to plagiarise. In this study, there was no indication that Aum intended to steal ideas from the source texts. This was a case of a student doing literally only what she was instructed by the teacher, no more and no less. The fact that Aum demonstrated such a high level of object- and other-regulated behaviour emphasised the teacher-directed nature of Thai classrooms.

Also, seen in Rose’s data was limited strategic control over the source texts. In her attempt to link the source text to her own ideas, Rose’s careless reading resulted in avoidable errors when quoting the source (Excerpt 10, p. 252). This, in essence, indicated the lack of skills needed for discourse synthesis. There was also an instance whereby Rose was attempting to integrate information from Text B into her writing. Having set a goal to paraphrase, she only made one change to the source information and ended up quoting verbatim (Excerpt 16, p. 257). Rose’s aborted attempt to paraphrase is consistent with Keck’s (2006) observation that for unskilled writers, “attempted paraphrase was defined as an instance in which a writer selects a specific excerpt of a source text and makes at least one attempt to change the language of the selected excerpt” (p. 263). It appeared Rose’s understanding of ‘paraphrase’ was that the original text must be modified using her own words. But since she was not skilled enough, she resorted to quoting direct and putting the information in quotation marks as stipulated in the instruction (M). Here, Rose had oriented herself towards a particular action but the action was not fulfilled simply because it was at the upper end of her ZPD (Guk & Kellogg, 2007). Despite her intention, the orientation basis of an action failed to influence the action that followed. This study shows that failure to paraphrase or cite the source information appropriately could have resulted from participants’ incomplete conceptual understanding, insufficient comprehension, and lack of linguistic resources, rather than a deliberate intention to present others’ ideas as their own. This finding is consistent with the finding reported by Garcia (2012) that while learners demonstrated increased conceptual understanding through verbalisation, their understanding and verbalisation could be incomplete and they
might not have full regulation over the learning concepts, as evident in their limited performance.

6.3.3.2 Task representation

The findings show task representation was largely informed by how well the participants understood the instructions. As shown in Aoddy’s data, misinterpretation or poor understanding of the instructions could lead to poor task representation and inevitable poor writing performance. Aoddy was not be able to formulate effective plans or clear writing goals. Ill-formulated plans and ill-formed goals in turn resulted in poor organisation of ideas and content. The absence of clear task representation hampered Aoddy’s effort to write (Excerpt 12, p. 154). This finding is consistent with Flower’s (1990) observation that task representation is essential in guiding writers, particularly during the idea generating stage, without which writers will have difficulty in shaping what they want to write.

Aoddy wrote a summary instead of an argument, which indicates that his task representation was different from what was described in the task prompt. Nevertheless, there was evidence that his summary task representation guided his performance (Excerpt 12, p. 154). As he summarised, Aoddy relied heavily on the three source texts (Excerpts 23&24, p. 163). Summarising and copying as seen here was also reported by Shi (2004) who observed that students who summarised used more words from original sources whereas those who expressed their own opinions relied more on their own words to complete the task. It appeared Aoddy did not use the source texts as his mental tools to generate new ideas, and worked on identifying main ideas and putting these together. As he summarised, he inevitably borrowed the authors’ words.

Aoddy’s summary task representation and his use of verbalisation to practice interrogative sentences also highlight the notion of “same task different activities” (Coughlan & Duff, 1994). In L2 research, Coughlan and Duff challenge the view that tasks set by teachers or researcher are “controllable and measurable” (p. 174) and contend that a given task can be interpreted differently by different learners, and that, due to their different expectations, understandings and intentions, learners performing the same task may engage in different activities. This contention is reiterated by Lantolf and Pavlenko (2001) who assert that “the significance languages and language study have for the
individuals” could result in learners performing different activities while appearing to be doing the same task (p. 146). Less self-regulated participants like Aoddy and Aum, performed actions with insufficient orientation. Other participants, able to understand the task prompt, were in a better position to construct meaningful task representations. Rose, Chubby, and Mathew, for instance, were able to successfully self-regulate with a meaningful orientation basis, purposeful execution and thoughtful monitoring or control.

Self-regulated participants were able to meaningfully create an orientation basis for their action. With a clear task representation, Rose, Chubby, and Mathew, in particular, were able to orient themselves appropriately. Successful orientation was evident as data showed them examining the task prompt and the source texts. They also considered what they already knew, drawing on this to select option A or B and making their decision after taking into account factors such as task requirements and knowledge of subject content and strategies. As they interacted with texts and negotiated task demands, their self-directed speech functioned metacognitively, regulating and shaping their thoughts.

Task representation is essential during the information search stage in reading-to-write. Learners who search and locate more relevant information for their writing during pre-writing stage tend to produce higher quality writing (Plakans, 2008). This means pre-writing activities are linked to learners’ understanding of task. With a clear task representation and orientation, Rose, Chubby and Mathew were able to plan. Planning became semantically useful as it showed what they had already conceptualised which may have suggested what they had yet to conceptualise. The findings on Rose, Chubby and Mathew’s self-regulatory planning behaviour are consistent with those reported by Plakans (2008), who found that skilled student writers interacted with text and task meaningfully, planned comprehensively and recognised potential use of the sources they read.

While all participants engaged in the planning phase of the task, there were observable differences how they planned and carried out their plans. Aum, for instance, did some planning, but, despite her relatively clear task representation, was unable to make efficacious use of the Toulmin model (TM). In fact, her brainstorm became her first draft as she ended up generating content from background knowledge (Excerpts 9&10, p. 180). Her initial plan to organise her writing according to the TM and the source texts
(Excerpt 8, p. 179) was not followed through and she ended up writing mainly from everyday experience rather than using the source information to substantiate her claims. Aum occasionally reread the source texts, expanded on the source information, and used this without correct citation. Chubby, on the other hand, showed that planning played a crucial role in her self-regulation. Oriented by her plan, Chubby looked for related information more intentionally and her rereading became more purposeful (Excerpt 6, p. 198 & Excerpt 11, p. 203). Through planning and goal-setting, she was able to consciously attend and modify her plan as she progressed through the activity and used source information appropriately. Chubby’s self-regulated behaviour is consistent with findings reported by You and Joe (2006) that meaningful goal-setting leads to better text selection and integration of source information in subsequent writing.

In the present study, the findings also show that not all planning was written down in participants’ brainstorm or drafts; much was done through verbalisation as participants articulated goals or verbally rehearsed ideas overtly before inscription. From a sociocultural perspective, this points to the interface between speech, thinking and writing. According to Vygotsky (1986), “planning has an important part in written speech, even when we do not actually write out a draft. Usually we say to ourselves what we are going to write, this is also a draft, this mental draft is inner speech” (pp. 242-234). The findings show that participants carried out a considerable amount of planning verbally and that verbal planning played a significant role in regulating cognition.

Planning together with monitoring was also an aspect of self-regulation demonstrated by Rose who revisited her plan regularly and made changes to her plan as she progressed through task. Initially, Rose’s brainstorm was based largely on the five paragraph format with only one indication of how text (Text C) could be used (Excerpt 7, p. 249). Aided by verbalisation, she was able to modify her task representation and eventually was able to draw supporting evidence from all three source texts (Excerpts 13, 16&17, pp. 256-258). In effect, Rose demonstrated that task representation was not static. As her task representation evolved, it appeared her reading and writing goals also changed. One of these changes was to incorporate more supporting information from the source texts.
6.3.3.3 Logic, coherence, and revision

The findings show participants demonstrated varying degrees of self-regulation over coherence, logic, and revision across cases. Self-regulation also varied for each participant concerning different task aspects, namely, decision making, providing supporting evidence, attending to coherence, and dealing with revision.

The first aspect of logic was decision-making. Self-regulated participants, like Rose (Excerpt 7, p. 249), Chubby (Excerpt 2, p. 194), and Mathew (Excerpts 1&8, pp. 219&226) prioritised their time and attention in managing task-related challenges. In dealing with problems, self-regulated participants, for instance Chubby (Excerpt 6, p. 198) and Mathew (Excerpt 13, p. 230), articulated their logical thinking and reasoning processes more comprehensively than less regulated participants. Their verbalisation showed consistently high proportions of questions for which answers were provided and which led to further actions as opposed to questions which were not followed up. They perceived problems at hand and dealt with competing problems arising simultaneously more successfully than less self-regulated participants who often left problems unsolved (Aoddy, Excerpt 7, p. 150) or opted for an unsuitable solution such as relying too much on anecdotal or experiential information (Aum, Excerpt 10, p. 180).

A second aspect of logical thinking in argumentation was providing supporting evidence for claims with appropriate data from the source texts. This was an important aspect of the Toulmin’s model taught during the intervention. Research has shown that L2 writers are often ill-prepared to cope with such a task (Qin & Karabacak, 2010; Saito, 2010; Varghese & Abraham, 1998). In this study, less self-regulated participants, such as Aum and Rose, spent little time rereading the source texts during planning and subsequently showed a tendency to draw on experiential knowledge to support their claims. This was evident in the textual analysis of their essays (Aum’s 2nd paragraph, p. 170 & Rose’s 4th paragraph and her conclusion, pp. 242-243). Notably, Aum used no citation, while Rose often left the source information unattributed. Conversely, Mathew and Chubby, having spent more time planning and interacting with the source texts, were more likely to think about reasons and supporting evidence beyond their own experience. Mathew cited Text A and Text B as well as elaborating on the texts he selected as shown in the second and third paragraphs (pp. 216-217), while Chubby managed to cite all three sources (2nd, 3rd, and 4th paragraphs, pp. 191-192).
Specifically, Chubby demonstrated that her logical thinking in supporting her argument using source information began as early as the pre-writing stage. In her brainstorm, Chubby paid close attention to both the content and organisation of her essay. She took notes during and after reading. She systematically organised her notes according to her writing purposes. She identified the main point of each paragraph and indicated clearly how she would support each point and from which source text specific information could be drawn.

While the above findings point to meaningful use of source information by some participants, regulation of textual integration was not the main strength of participants’ writing behaviour, possibly due to lack of experience and the short duration of the intervention. That is, even though supporting evidence was occasionally drawn from the source texts, the information was typically not well integrated into their own writing; it was not suitably placed to advance the argument. Moreover, integration of the source information was not accompanied by comments or interpretation that would indicate meaningful abstraction of original ideas cited. One exception was Mathew who set a clear goal to include his own comments after source integration (Excerpt 12, p. 229). This suggests that the instruction was effective and with more practice other participants might have gained regulation in this area.

The findings also show that incomplete comprehension prevented meaningful synthesis and that information that was not well-understood got left out. Specifically, all participants had difficulty understanding ‘a dangling tablecloth’ (Text B). Consequently, the idea of rearranging the environment to prevent children misbehaving was not grasped and did not appear in any of the essays. This finding confirms Lin’s (2008) observation that without clear understanding, learners were unable to critically engage with the source information and that this shortcoming inevitably affected synthesis quality.

A third aspect was the ability to coordinate or connect their ideas logically and coherently. The findings show that participants had had little experience in argument writing and, despite explicit instruction, had difficulties linking different ideas and remained unsure of how to present ideas in logical order. For instance, often their claims were not followed by evidence. Consequently, their writing appeared unfocused and unbalanced. In this study, participants’ writing demonstrated mainly knowledge-telling rather than knowledge transforming, which required logical thinking and reasoning.
priorities (Bereita & Scardamalia, 1987). These findings correspond to findings of previous argumentative writing research, which suggest that argumentation is an overwhelming challenge for most L2 writers and that extended practice is needed for writing improvement (Kongpech, 2006; Qin and Karabacak, 2010; Saito, 2010). Another possible explanation is that participants’ lack of reading skills might have impacted negatively on their writing performance. Previous research suggests that poor reading may lead to poor writing (Plakans, 2008; Wolfersberger, 2007). Plakans reported that unskilled readers were not able to make efficacious use of their reading in their writing. Similarly, Wolfersberger found that lack of critical reading hampered his participants’ writing performance. Another interpretation could be that participants did not benefit much from the Coherence SCOBA, which was not included earlier into their writing activity but used superficially during their rushed revision.

A fourth key area discussed here was revision. All participants reported that their previous writing experience was to write predominantly to pass their exams and they focused mostly on lexical and grammatical accuracy during revision. In their reading-to-write task, they demonstrated similar revision behaviour and rarely paid attention to organisation and content. They did not check the source information used in their writing against the original sources. Interpretation, expansion and evaluation of the source information were largely ignored. In short, revision did not lead to reformulation or re-organisation of ideas or text segments which would reflect logical reasoning in idea progression. The propositions put forward earlier remained unchanged. Propositions were not scrutinised as to whether they had been well supported. The locations of phrases, clauses and sentences were not altered. As shown in Aum and Rose’s data, a number of claims and grounds were not well located. Had certain text segments been rearranged, ideas would have been built more logically and better arguments presented.

In sum, revision was largely superficial and most participants focused on correcting spelling and grammatical errors. That Thai EFL learners lack revision skills was also reported by Dhanarattigannon (2008) and Srichanyachon (2011). Dhanarattigannon pointed out that Thai students “were trained to trust and respect the teacher as the expert . . . and believe that only the teacher could correct their mistakes” (p. 227). Similarly, Srichanyachon found that her participants focused mainly on spelling and grammar, lacked skills in identifying their errors, and favoured teacher feedback over
peer- and self-revision. The fact that Thai students relied on the teacher to point out their errors could explain why they were not skilled in self-revision. The findings of this study, taken together with those reported by Dhanarattigannon and Srichanyachon, suggest that, for Thai learners to become more self-regulated, they need instruction on how to revise for rhetorical organisation, argument and coherence.

6.3.4 Developmental changes

Three instances of developmental changes discussed next are (1) increased understanding of strategy and goal-setting, (2) participants’ theoretical understanding of argumentation and the reading-writing relationship, and (3) participants’ theoretical understanding of verbalisation as a scientific concept.

6.3.4.1 Goal-setting

The findings show that development regarding goal-setting occurred across all cases. Notable differences were that some participants applied goal-setting beyond their classroom context while others concentrated on goals specific to reading and writing. Chubby, for instance, set specific goals to organise her writing. Mathew, Rose, and Aum were able to set reading and writing goals as well as other goals beneficial to their daily life, whereas Aoddy focused on mastering interrogative sentences.

These findings are not congruent with the findings reported by Danuwong (2006) who found that, following strategy training, participants tended to avoid strategy modelled by the teacher and continued to rely on on-going teacher intervention in problem-solving. For these participants, “the failure to use the higher order thinking strategies of the Planning and Problem-solving processes seems to prevent these students from becoming independent learners in English” (p. 252, italics in original). Unlike a teaching context which Danuwong observed, where learning was strongly directed but with little explicit instruction, the present intervention invited students to take an active part in setting shared goals. Additionally, the learning concepts, related strategies and particularly goal-setting were explicitly introduced, explained and contextualised so that participants were able to relate to these. More importantly, strategy modelling in this study began with non-academic topics and involved student engagement from the very early stage.
Nevertheless, not all participants in the present study articulated their goals. For instance, Rose set a new goal to write an essay instead of a paragraph but only made this explicit in her self-reflection after the task (Excerpt 9, p. 251). Also, goals set by participants varied in their specificity. Aum, for instance, set goals not to write an overly long essay as she had done in the past and to finish writing within the time limit. Mathew also set a goal with reference to his past performance to paraphrase better (Excerpt 8, p. 226). Chubby, on the other hand, indicated early in her brainstorm specifically which source texts to use to support her propositions (Excerpts 6 & 7, pp. 198-199). The findings show that these goals were significant as they contributed to orientation and subsequent actions.

One aspect of less self-regulated behaviour was evident in Aoddy’s strong focus on one particular goal and his inability to modify this goal or to set other goals that might have helped his reading and writing. As seen in Aoddy’s behaviour, his overarching goal was to master interrogatives. The question remains whether he would have benefited more from verbalisation and demonstrated more self-regulation, if he had not focused on interrogative sentences.

Despite not being able to set a variety of goals to address different task aspects or to produce a reasonable essay, Aoddy demonstrated that one way to gain regulation over task demands was through purposeful imitation. Vygotsky (1998) indicates that imitative actions are directly and purposefully subsumed in the immediate activity being carried out by an individual. As noted by Vygotsky, “imitation of a complex, sensible, and purposeful action never is successful without an understanding of the structure of the situation” (p. 236).

Through purposeful imitation, instances of self-regulation could be traced. Although Aoddy imitated most of his questions from the lists provided, there was evidence of development unfolding in that he modified and adapted questions to suit his learning context (Excerpts 5 & 11, pp. 149&153). His questions were also purposeful, timely and appropriate for the action he was carrying out. Aoddy was also imitating with full intention to internalise both the goal and the means to master verbalisation and achieve self-regulation as modelled by the researcher.
According to Guk and Kellog (2007), development with regard to tool-mediated actions is “whether or not the mediational means is under the control of the learner. It is this increasing control over the mediational means that allows the learner to progress from other-mediation to self-mediation” (p. 292). In Aoddy’s case, nascent development was detected as Aoddy was able to select appropriate questions and articulated these questions at the right moment. This showed that Aoddy had understood the concept of verbalisation as a regulative strategy and purposefully opted to persevere with self-questioning despite not being able to self-generate the questions. It appeared Aoddy’s inability to form interrogatives at will hampered his ability to verbalise for self-regulatory purposes. This finding is consistent with the finding reported by Knouzi et al. (2010) that lack of oral proficiency resulted in inefficacious verbalisation; participants with limited speaking skills produced verbalisation with limited scope and content and were not able to use speech to problem-solve across task demands.

Vygotsky (1978) states that instruction should be contingent on learners’ maturing abilities just beyond what learners can perform unaided and not aimed at matching with learners’ already fully developed abilities. In Aoddy’s case, however, the task appeared to be too difficult for his language proficiency and possibly did not fall within his ZPD, so he set a goal for an activity that was within it.

6.3.4.2 Understanding of argumentation and the reading-writing relationship

In this study, the findings show that understanding argument rhetoric from the Toulmin’s perspective helped participants see both reading and writing as goal-directed action. Some of these goals are to take a stand, to present certain viewpoints, and to agree or disagree. Additionally, participants also came to understand that writing can serve to convince or persuade others to take particular actions.

As shown in the findings on intertextuality, participants came to understand that the writer holds particular intentions and, through writing, endeavours to make their intention clear. The participants also demonstrated their understanding of argumentation as a social means through which their own views could be conveyed (Hyland, 2002). There was also evidence that their writing began to move away from simply recording past experiences. Although most participants still based their writing on prior knowledge, they also attempted to explain, justify, elaborate and support their ideas. Even though
their writing was still plagued by unclear expressions and ineffective rebuttals, their use
of the Toulmin’s model indicated increased awareness of argument rhetoric.

The findings in this study also show that the participants gained better understanding that reading and writing are reciprocal skills. They understood that writing can be based on reading and that source information used in their writing must be properly cited. Nevertheless, there was also evidence that conceptual understanding does not always transfer to actual performance. For instance, despite her conceptual understanding of the use of source text (Section 5.2.4, p. 189) and her explicit goal to “draw information” from the source texts (Excerpt 11, p. 181), it appears that Aum’s knowledge of discourse synthesis, particularly source use and citation, was not evident in her end-of-intervention reading-to-write task. This phenomenon can be viewed in respect of Vygotsky’s (1987) “verbalism”, associated with teaching and learning for the sake of knowing, but the learning does not bear practical outcomes, more specifically, for problem-solving purposes (p. 170). Vygotsky contends that the transformation from knowing to doing is fundamental to purposeful learning, that quality learning extends beyond the acquisition of the definitions of concepts, and that it should not be assumed that learned knowledge will transfer to practical activity. It appears Aum was not able to use her knowledge in solving problems regarding citation practice during her writing activity, partly because she was not able to deliberately access this knowledge and partly because she took the instruction so literally. This suggests that, for Aum, more instruction and attention on source use is needed to avoid verbalism, whereas other participants appeared to understand that citation must be used following textual borrowing.

6.3.4.3 Theoretical understanding of verbalisation

The findings show that all participants understood the self-regulatory purpose of verbalisation. Class observation also revealed that they had positive attitudes toward verbalisation and used self-directed speech as they sought to gain control during problem-solving processes. Prior to the intervention, the participants viewed oral language as a mode of communication but did not see speech as a mental tool.

Following the intervention, STI made the participants conscious of verbalisation as a cognitive tool to regulate decision-making during the task. Self-regulation was evident when their thought and speech become mutually constitutive and “initiate a new
form of behaviour”, that is, “speech begins to serve intellect, and thoughts begin to be spoken” (Vygotsky, 1986, p. 82). In most instances their self-directed speech fed into their future-directed thinking. Self-directed speech is thus strategic: “it focuses attention; it externalizes hypotheses, tests them and supplies possible solutions, and it mediates their implementation of such strategic behaviour as planning and evaluating” (Swain, 2000, p. 108).

The findings also show all participants understood the purpose of verbalisation and used it strategically. Also, despite being told beforehand that they could use a dictionary in the final reading-to-write task, none of the participants did this. This suggests they had positive attitudes towards self-questioning and self-instruction and to a certain extent trusted that verbalisation would help them during task. The findings also show that participants emerged from the intervention knowing that they could use self-directed speech to describe the problem, seek solutions and justify their decisions. That is, they understood that verbalisation played an important role in shaping their higher mental functions and they were able to achieve goals that would have been much more difficult to attain without verbalisation.

Despite their conceptual understanding of verbalisation as a strategy, participants thought verbalisation was not appropriate in class. This was because they were taught to verbalise overtly and had not developed the ability to use self-questioning and self-instruction intramentally during the reading-to-write activity. It is conceivable that with sufficient rehearsal, self-questioning and self-instruction can be fully internalised. In time, participants may be able to carry out self-directed speech intramentally during discourse synthesis.

This study recognises that the use of overt verbalisation in a large class may be problematic and that goal-setting may be an area that requires urgent attention. The limited extent to which learners in Thai EFL classrooms participate in decision-making and goal-setting processes raises questions regarding strategy instruction which aims at enabling learners to enhance their self-regulatory functions rather than relying on teacher control. As speaking in class is not a common practice in the Thai educational system, understandably Thai learners fear criticism, inaccuracy, and exclusion (Conlon, 2005). Previous studies suggested Thai students remained silent for reasons such as their respect for the teacher (Siengthai & Leelakulthanit, 1993), lack of oral proficiency (Tapinta,
2006), and desire to maintain classroom harmony (Srinon, 2009). It was common for Thai students not to say anything during class discussion even when invited to do so; they were afraid of being ridiculed or rejected by their peers. Some students were too shy to ask questions or to share their opinions and they “did not speak out to the teacher because it was considered rude” (Dhanarattigannon, 2008, p. 227).

Interview data in this thesis yielded similar findings. Most participants thought it would be inappropriate to verbalise in class for fear of making mistakes and disturbing other class members. Participants’ concerns indicate that while verbalisation had been used strategically during the intervention, it had not been fully automatised and abbreviated. Perhaps with extended practice, participants would be able to use it intramentally. Nevertheless, overt verbalisation is necessary if it is to be modelled during explicit instruction.

So far, in this chapter I have presented key findings and discussed these in relation to key SCT perspectives and previous studies. Next, based on these findings, I outline key pedagogical implications and discuss the methodological and theoretical contributions made by this thesis.

6.4 Pedagogical implications

In this section, I discuss three issues that emerged from the findings: verbalisation training, the inclusion of learning materials in activity, and the role of human mediation. Discussion in this subsection is based on interview data and learning behaviour observed during the intervention.

6.4.1 Verbalisation training

The first pedagogical implication is the implementation of Gal’perin’s (1989) Systemic Theoretical Instruction (STI), of which verbalisation is imperative.

Gal’perin’s STI and concept-based instruction has been successfully employed in previous studies (Frazier, 2013; Garcia, 2012; Negueruela, 2003). Negueruela provided insights into how verbalisation might mediate theoretical understanding and promote conceptual development. Richer theoretical understanding of learning concepts was also reported by Frazier (2013). Verbalisation reveals “how conceptual learning proceeds in
cognitively-mediated goal-directed activity” (p. 106). Although these studies contribute to our understanding of concept-based instruction and outcomes, the studies obtained verbalisation data without systematic verbalisation training. Also, they have not emphasised the role of verbalisation as a strategy to promote a shift from object- or other-to self-regulation. The study by Garcia (2012), for example, showed that participants’ conceptual understanding became much richer during the interview in which the instructor became a conversation partner providing prompts and cues. In this instance, determining participants’ conceptual understanding could become problematic as it was not easy to determine who did the thinking or the rationalisations that led to better understanding. As the instructor’s questions, repetitions and clarifications scaffolded participants’ understanding, the conceptual gains as evident in participants’ verbalisation appeared other-regulated rather than self-regulated. A central aspect of the verbalisation training in the present study was to permit regulation by self. Perhaps here lies the value of self-verbalisation as a means to self-regulate. Particularly when no other persons are available, oneself becomes one’s first conversation partner.

The above studies have not reported explicit verbalisation training, but on the other hand have argued that self-directed speech can significantly influence thought processes. Specifically, these researchers assert that verbalisation fosters the development of conceptual understanding. Based on this body of evidence, verbalisation training should be a primary consideration in the instructional efforts which seek to optimise learners’ self-directive and intrapersonal control.

It is perplexing that these studies held verbalisation as essential to learning without previously having assisted participants to be in a position to deliberately regulate their cognitive processes through speech. The question here is not whether verbalisation should be taught but under what conditions a systematic and controlled conceptualisation and application of verbalisation can be included into the learning activity so that self-directed speech can be reliably useful and lead to self-regulation.

In addition to the absence of explicit verbalisation training, these studies differed from the present investigation in their focus on one area of learning, understanding of grammatical aspects, whereas the present study required participants to learn and apply multiple learning concepts in a highly complex task of writing from multiple sources. Verbalisation was the key strategy used by participants throughout the intervention to
help them learn other concepts such as argumentation and coherence as opposed to only being applied while reading-to-write.

In this study, explicit verbalisation training (Chapter Four, Section 4.7.1), in part, contributed to answering the question of how “to create psychological processes that set individuals free, rather than how to observe the existing processes” (Stetsenko & Arievitch, 2004, p. 77). As documented in Section 6.3.3, this study provides empirical evidence that, aided by verbalisation, participants were able “to control their behaviour from the outside” (Vygotsky, 1978, p. 40) and to “rely on their own symbolic verbal support in the form of private speech” (Lantolf & Thorne, 2006, p. 305).

To begin with, verbalisation training may have the greatest payoff if it is linked to the use of oral language inherent to the Thai way of communication. From this perspective, introducing more conversations in class is not at odds with how learners would normally communicate, and, therefore, it is possible see that their conventional discourse skills can be well utilised and will not be ignored altogether. The uneasiness that may arise following the introduction of verbalisation which requires learners to speak more in class might be alleviated, at least partially, by drawing students’ attention to their oral skills already well used in everyday communication, and, if proven beneficial, verbalisation may be done initially in a learners’ mother tongue. Alternatively stated, teaching learners to verbalise may be more effective if verbalisation is presented in the way they can relate to socioculturally.

Given the significance of speech in human cognitive development, it is prudent to sensitise learners to the benefit of self-regulatory private speech rather than to assume that learners will discover by themselves how to verbalise strategically. Explicit instruction in which verbalisation is systematically taught and rehearsed, as seen in this study, also reflects the teaching of scientific concepts proposed by Vygotsky (1986) which does not favour self-discovery or accidental learning.

### 6.4.2 The inclusion of learning materials in activity

Issues arising from the findings which give rise to pedagogical implications in this section relate to the use of the coherence SCOBA and the Toulmin’s model.
The findings on the use of the coherence SCOBA show that participants did not attempt to include the SCOBA early in their writing and only used it superficially during revision as practised in class. This suggests that how a learning material is introduced into activity could significantly impact how it is subsequently applied by learners. Participants’ verbalisation barely contained any trace of deliberate attention paid to creating textual coherence. Most participants did not explicitly verbalise their intention or goal-setting with regard to cohesive ties, with the exception of Rose’s repeated use of ‘right’ to form lexical cohesion (Excerpt 15). Also there was minimal verbal data concerning topical progression, apart from a segment from Aoddy’s verbalisation indicating his wish to use the topical progression sheet given in class as model text as he searched frantically for it (Excerpt 18). It appeared all topics and sub-topics had been included in the essays mostly according to the participant's understanding of argumentative coherence and organisation based on the Toulmin's argument model. The coherence SCOBA was used superficially to check the essays in the last few minutes before handing them in.

This study also shows that the timing when learning materials were included in the activity by participants influenced the structure of their cognition as well as the task, as evident in participants’ verbalisation and their writing. This is shown in the use of the TM by Chubby, who deliberately incorporated the TM early during planning. Arguably, this earlier inclusion may explain why she was more able to focus on text-mining and make constructive use of the source texts than were other participants who had not conceived their brainstorm in a similar manner. In this study, Chubby deliberately considered the TM a prerequisite for organising her writing.

Conversely, for Aoddy and Mathew (and Aum and Rose to a certain extent), both the TM and the source texts did “not readily become the object of consciousness or reflection” (Wertsch, 2007, p. 185). Aoddy did not understand the source texts well enough to relate these to the TM, whereas Mathew simply forgot about the TM. Aum and Rose made superficial use of the TM; they also supported their claims mainly with background knowledge rather than the source information.

It is also possible that participants who had not been mindful of the Toulmin’s argument rhetoric might be less likely to consider the use of source information argumentatively and more likely to rely on their past experience for supporting evidence.
as the needs arose. Unlike Chubby who deliberately used the TM during planning, the other participants’ planning lacked parameters and an orientation basis that would lead to meaningful processing of the source information. Not having explicitly included the TM as their focus appeared to undermine their future actions.

The above findings are pedagogically significant. They point to the need for teachers to pay close attention to the teaching procedures, particularly the timing and the nature of tool use, as they introduce instructional materials to learners.

6.4.3 Teachers as mediators

The above discussion suggests that explicit mediation by the teachers as human mediators is needed. In explicit mediation, mediational means is deliberately and systematically introduced into the stream of activity to shape how the activity is performed (Wertsch, 2007). In this study, my role as a human mediator includes: (1) making explicit the learning content, activities and purposes; and (2) assisting the participants in identifying meaningful activities, gaining theoretical understanding of relating concepts and procedures, acquiring mastery of tools required for successful completion of activities, and applying knowledge in learning activities that lead to cognitive gains (Wells, 1999).

One form of explicit mediation as shown in this study is verbalisation training (Section 4.7.1, Chapter Four). Another instance is the systematic inclusion of learning materials such as the Toulmin’s model, the coherence SCOBA, the self-questioning and self-instruction lists, and the argument revision checklist. The findings in this study show that one key aspect of explicit instruction lies in the timing and amount of teacher intervention during the earlier stages of the Gal’perin-inspired mental formation concept.

As well as showing when and how the learning materials should be used, other areas for explicit mediation are goal-setting and remediation of the writing concept. Interview data revealed that participants lacked goal-setting opportunities and experience. Most learning goals were set by the teacher and participants strictly followed instructional directions. During the intervention, similar learning behaviour was observed. Specifically, during the reading-to-write task, Aum and Mathew demonstrated teacher-dependent or other-regulation regarding the essay title, whereas Aoddy and Chubby
simply forgot this (M), and Rose was the only one who gave a title to her essay (Excerpt 7). Aum (M) and Mathew (Excerpt 19) followed the instruction on the task prompt strictly and decided not to assign a topic to their writing because it was not explicitly stated by the researcher. The findings also show that Aum rigidly followed the instructions with regard to citation because of the lack of specific instructions in the task prompt.

The important role of the teacher and the teacher-dependent nature of the Thai classrooms were also evident in how participants applied the coherence SCOBA. It appeared participants did not consult the SCOBA during planning, drafting or writing stages. When introduced in class, the SCOBA was used to analyse reading texts. Although it had been pointed out to participants that the SCOBA could be used at any stage of reading and writing, participants adhered to their practice of using it for text evaluation rather than text production. This behaviour could be considered as object- and other-regulation, that is, participants followed the instruction strictly and only did what they were shown during training. It also indicates that participants were not able to apply the SCOBA earlier in their writing as suggested without explicit instruction and close guidance.

The notion of teachers as mediators coincides with the institutionally preferred role of Thai teachers in shaping the learning content and directing learning behaviours of their pupils as “most students only showed the responsibility to take charge of their own learning when assigned to do so under close guidance” (Danuwong, 2006, p. 261). Thai teachers are privileged in that they already share the students’ educational background and are, therefore, in a position to differentiate what should be promoted and what should not be disturbed. In addition, teachers need to understand writing as a mental tool which stands apart from writing for record-keeping purposes as seen in the Thai literacy practice. Likewise, learners need to be made aware of the differences and encouraged to adjust to the concepts of writing-to-learn and learning-to-think. These objectives cannot be achieved without the courage to change and a move away from how teachers and learners view their roles and responsibilities.

The findings on participants as readers and writers of English (Section 6.3.1), based on class observations and interview data, show that participants were not accustomed to using writing as a mental tool for cognitive development or social purposes. These shortcomings were evident in their statements regarding lack of writing
purposes and an over-emphasis on vocabulary and grammatical accuracy. The findings on the impact of narrative oral style on participant’s writing also show that writing mainly serves the purpose of recording accounts of past experiences. In class, all participants reported that they wrote primarily from what they had read, heard, and done. More importantly, all participants associated writing with putting words on paper as a form of knowledge preservation and a means of getting good grades. When they answered exam questions, they attempted, as much as possible, to write as closely to what their textbooks said and what their teacher had taught. This points to Kozulin’s (2002) observation that “even literacy acquired in the nominally formal education setting does not necessarily lead to the cognitive changes unless this literacy is mediated to a student as a cognitive tool” (p. 20). During class discussion, the participants focused on writing as a product or an act of inscribing. During the interview, Aum, in particular, described her writing as “recording sentence order” (I200, Section 5.2.1).

It is apparent that writing as conceptualised in Thai culture, according to the historical account presented in the literature review (Section 2.3.4), differs from writing expected in western universities. The former privileges the continuation and preservation of set knowledge (Jory, 2000), whereas the latter values knowledge transformation (Wells, 1999; Wertsch, 1991). As the Thai educational system fosters rote-learning, most Thai students learn by heart the content of the books as defined by the curriculum and exams and write to display knowledge as set by the teachers and course content (Kaewnuch, 2008). Conversely, western education attaches much significance to student’s ability to think clearly, write to argue their points and to gain deeper understanding of the subjects (Hyland, 2003). Corresponding implications are that such contradicting cultural and context specific practices inevitably reduce any chance of successful acculturation when Thai students pursue postgraduate studies outside their home country, and that writing difficulties are magnified due to the conflicting perceptions of knowledge, learning and writing by Thai students and western educators.

Overall, the findings from this study support the argument that human mediators are required. Explicit mediation by the teacher is essential because “the process of mastering a semiotic tool typically begins on the social plane” (Wertsch, 2007, p. 187). As participants in this study responded well to instruction, the findings in this research
shift pedagogical attention to the role of knowledgeable others as advocated in SCT literature.

Explicit mediation is needed so that learners become more attuned to the types of rhetorical conventions and expectations valued in L2 academic community. Learners must be assisted to form an understanding that writing is not simply a means to transmit existing knowledge but a tool to create and foster new forms of thinking and that writers themselves play a vital role in co-constructing new knowledge with their readers. The primary pedagogical goal is to assist learners in reformulating their views towards writing and gaining new understanding of writing as part of a larger system of semiotic tools. To achieve this goal, composition teachers must move away from a transmission mode of instruction.

Negueruela (2003) notes, as “theoretical concepts need to be brought into learners’ consciousness through specific instruction and concrete activity” (p. 464). Thus, the concept of writing must be re-mediated so that writing becomes a semiotic tool and “not the means to express an already prepared thought, but to create it… not a reflection of world contemplations that has developed, but an activity that composes it” (Vygotsky, 1998, pp. 49-50). Viewed in this light, every piece of writing produces some form of change. It has potential to transform the writer’s particular viewpoints and further develop their mind.

The aim of remediation is not to take out the L1 beliefs, norms and values, but to allow for the appropriation of the type of reasoning and thinking, and most importantly writing, as valued in L2 environment. The role of explicit instruction is to place scientific concepts within the learners’ ZPDs, emphasise the concepts as part of a system and help learners “become aware of the necessity of using everyday concepts as a basis for building academic concept and preventing this concepts from remaining empty shells or undigested knowledge” (Haenen et al., 2003, p. 262).

The task of remediating the writing concept will not be a process free from difficulties and will take time to be fully implemented. One of the difficulties could derive from the time needed to provide teachers with appropriate training. Another could result from the need to formulate suitable implementation timeframes for the various educational levels. A major decision to be made is at what level of education students
should receive this type of mediation. Supporting mechanisms and collaboration between all stakeholders will also need to be considered.

6.5 **Methodological and theoretical contributions**

This thesis makes some important contributions. First, the study contributes methodologically to existing research in that it appears to be the first to apply Gal’perin’s STI and microgenetic method in reading-to-write composition research and elicit data following explicit verbalisation training as opposed to collecting natural verbal protocols from participants. Second, it also adds to the body of theoretical knowledge of the inclusion of speech in activity and presents a self-regulation model based on key microgenetic findings. These contributions are now discussed in turn.

6.5.1 **Methodological contributions**

One area of contributions from the current study lies in the research methodology and design. The first methodological contribution is the use of microgenetic analysis in composition research in which oral discourse is instrumental. Previous SCT studies examined verbal data microgenetically, but the method was mainly employed in research on speaking. Additionally, this study also shows that participants’ strategic behaviour can be meaningfully analysed and described microgenetically according to Gal’perin’s three dimensions of action, namely, orientation, execution, and control. To my knowledge, this study is the first to apply microgenetic analysis and these dimensions in data treatment.

The second methodological contribution relates to Vygotsky’s (1986) assertion that “the study of thought and language is one of the areas of psychology in which a clear understanding of interfunctional relations is particularly important” (p. 1). It seems proper that L2 research should also adopt this notion. Indeed, contemporary SCT research reflects Vygotsky’s emphasis on the role of language in cognitive development (Aljaafreh & Lantolf, 1994; de Guerrero, 2004; DiCamilla & Antón, 2004; Knuozii et al. 2010). Previous studies, nevertheless, tend to focus on oral interaction during teacher-led or peer discussion during speaking or writing tasks that did not include reading and writing as reciprocal skills. The present study departs from this trend by investigating the role of speech in self-mediated reading-to-write activity in which private speech and learning materials are instrumental. The instructional design of the present research has responded
to the call by Kozulin (2003) that “cognitive education programs should be built as a combination of a system of symbolic tools with the didactic approaches based on the principle of mediated learning” (p. 35). In addition to aligning with the SCT perspectives, the instruction in this study reflects recent research that examines reading and writing as integrated and reciprocal skills (Gebril & Plakans, 2009). Also, this study has answered the call made by Roca de Larios (2013) who sees the need to extend the body of knowledge from peer collaboration composition studies to cover detailed investigation of “self-sustained complex tasks by individual writers” (p. 445).

The third methodological contribution concerns the role of verbal data. In keeping with Vygotsky and Gal’perin’s conceptualisation that speech is the most powerful mediational means, I explicitly taught the participants to verbalise during task to introduce a shift of control in task regulation from myself to the participants.

Vygotsky (1978) contends that, through speech, children develop their capacities to regulate their behaviour and environment and that the ability to think abstractly aided by speech is the type of development unique to humans. While the works of Vygotsky on self-directed speech are typically associated with young children, the present study provides empirical evidence that self-directed speech can be successfully taught and employed by adults.

The finding that, following explicit training, the participants in this study were able to use verbalisation as a metacognitive tool for self-regulation is a valuable methodological contribution in itself. Through verbalisation, participants were in a position to actively engage with task demands instead of passively reacting to them. This finding contributes to the understanding that explicit verbalisation training positively influences participants’ task engagement and self-regulation. It suggests that purposeful verbalisation can be a powerful vehicle to facilitate greater control over one’s cognitive processes and task demands.

To my knowledge, the only SCT concept-based study which has systematically examined organised self-talk is by Holunga (1994) who investigated the role of speech in vocabulary learning. Several SCT studies have included verbalisation in their methodologies (Aljaafreh & Lantolf, 1994; de Guerrero, 2004; DiCamilla & Antón, 2004; Frazier, 2013, Garcia, 2012; Knuozi et al. 2010; Negueruela, 2003), but they did not
include verbalisation training. While it is becoming increasingly apparent that natural self-directed speech is critical for self-regulation, it remains unclear as to what should be the role of explicitly trained verbalisation through which self-regulation may be established. This study contributes to a limited body of research on verbalisation.

6.5.2 Theoretical contributions

This study makes two theoretical contributions. First, it adds to the existing body of knowledge about the deliberate inclusion of speech in activity for self-regulatory purposes. Second, this study proposes a model of self-regulation.

The first theoretical contribution is related to how participants in this study applied verbalisation as they sought to manage the task demands. In this study, verbalisation was explicitly introduced as a strategy for self-regulation, thereby addressing the deliberate inclusion of a psychological tool in the course of an activity (Wertsch, 1991b).

Microgenetic findings show that, whereas most participants were able to apply verbalisation strategically, Aoddy did not benefit from verbalisation as did the others. Although it is not easy to completely account for Aoddy’s lack of task specific progress, such a shortcoming could be attributed to several factors. First, Aoddy’s strong focus on articulating questions could have put him at a disadvantage as his mental resources were consumed by the lexico-syntactic demands of his speaking activity. Second, his self-questioning was relatively non-strategic in that it did not appear to significantly regulate his thinking processes. Self-questioning in this case reflects “nonintellectual speech” which does not affect cognitive functions (Vygotsky, 1986, p. 89). It appeared Aoddy’s inability to make efficacious use of verbalisation was due to his low speaking skills. That low oral proficiency impeded strategy use was also reported by Tapinta (2006) who reported that Thai EFL learners who were not able to form interrogative sentences at will failed to make maximum use of strategies taught. Similarly, Knuozi et al. (2010) observed that L2 French learners with low oral proficiency struggled in oral interaction and benefited from languaging much less than did their more orally skilled peers. Also, Aoddy could have suffered a setback due to incomplete comprehension. Although he was poised to benefit from the orientation basis of the task prompt, he did not read this well enough to make sufficient conceptual gain. In fact, a task representation from which he could plan and generate content was absent. The fact that meaningful task representation was not
constructed represented missed opportunities for more orientation basis. Aoddy’s repeating of his statement that he could not write was indicative of his metacognitive awareness of his poor performance and the frustration he was experiencing.

From an activity theoretical perspective, self-questioning, to Aoddy, appeared to be at a level of action not yet routinised or automatised, and thus required his conscious attention. The routinisation or automatisation, in this case, however, has much to do with linguistic rather than strategic application. From a Vygotskian perspective, Aoddy’s self-questioning has not yet been fully internalised, despite the self-regulatory purposes having been well understood. From a Gal’perin’s STI perspective, verbalisation is far from being abbreviated. That is, it will take some time before Aoddy is able to strategically apply verbalisation intramentally.

For all participants, verbalisation appeared to function at a level of action, not yet routinised or automatised; participants still had to apply it consciously as a strategy. Nevertheless, for Aum, Chubby, Mathew, and Rose, verbalisation also served as an operation mediating the reading-to-write activity. According to Wells (2007), at the operational level, “using a material tool or a sign system becomes relatively automatic and thus does not distract attention from the object that it is mediating” (p. 163). Wells refers to scripts from his meetings with colleagues and specifies that “the goals of our actions were both constructed and achieved through discoursing” (p. 169). Similarly, the goals of participants’ actions in this study were both created and accomplished through verbalisation which helped organise their cognition and writing. Wells contends that, “the fact that discoursing has levels of organization—utterance functions, semantics, lexicogrammar, and phonology—does not mean that it is not functioning as an operation” (p. 176). This appeared to be the case for Aum, Chubby, Mathew, and Rose, who did not have to pay conscious attention to the syntax of their self-questioning. For Aoddy who lacked the necessary oral proficiency, on the other hand, verbalisation remained largely as an object of his activity; he aimed to master speaking skills.

The application of verbalisation as a mental tool to mediate participants’ writing-from-sources activity, once mastered, could support Wells’ proposition that discoursing functions at the level of automatised operation. To truly become a mental tool at the level of operation as stated by Wells, verbalisation has to progress along the step-wise formation of mental function and becomes fully abbreviated (Gal’perin, 1989). As seen
in this study, it remains a conscious strategy voluntarily included into the stream of actions, and deliberate goal-setting was required as an onset of self-regulatory behaviour.

The findings in this study reveal that self-regulation is an on-going and emergent process and that different participants demonstrated self-regulatory behaviour in response to various problem spaces differently, as shown in their effort to gain control over intertextuality, task representation, and logic, coherence and revision (discussed in Section 6.3.3). During the various sub-writing processes, such as planning, drafting and revising, different participants also demonstrated self-regulation in a variety of ways and to varying extents. Aoddy, for instance, relied on the self-questioning list throughout the activity, whereas Chubby made early and constructive use of the Toulmin’s model and was able to self-regulate well thereafter. Nevertheless, there were also similarities in how participants attempted to gain regulation over certain task demands. For example, all participants relied on the task prompt as an orientation basis for task representation. All participants also used the coherence SCOBA during revision in similar manner.

The findings in this study show various degrees of self-regulation, even by a single participant, relative to the different aspects of different concepts taught during the intervention. The findings concur with an observation made by Frawley and Lantolf (1985) that a given learner “does not necessarily have self-regulation in all tasks. Self-regulation is a relative phenomenon” (p. 20). Wertsch (1998) also notes individual differences in tool use and variation in learning development, and contends that a person “may demonstrate outstanding skills when functioning with one cultural tool but only average skills when functioning with others” (p. 45). Thus, participants could achieve self-regulation of certain task aspects such as overcoming vocabulary difficulties or recalling a certain piece of source information but not of others, for instance, addressing counterarguments or linking their own ideas with the source information. Not everybody could manage all task aspects successfully; none of the participants revised thoroughly and meaningfully; most of them understood the task prompt relatively well but Aoddy did not; and Chubby used the Toulmin’s model in her planning whereas the others did not. These findings show that no two individuals developed at the same pace with regard to the same aspects of the task.

From an activity theoretical perspective, different actions lead to different paths of text construction. Provided with the same range of mediational means, these
participants demonstrated differing tendencies to employ the means available to them. How they engaged with the mediational means was determined by their level of self-regulation, and yet their self-regulatory behaviour was also shaped by the application of the mediational means. In this study, participants differed in how they made use of the TM. For instance, Aoddy referred to the TM but was unable to make any gains due to his lack of task understanding, whereas Mathew’s verbalisation contained no trace of the TM features. Rose and Aum occasionally referred to the TM elements but did not incorporate these in their planning and appeared to mention each feature as it arose during the activity. Chubby, on the other hand, used the TM constructively and successfully very early in her planning.

As shown in this study, self-regulated learning involved learners’ intentional control deliberately exerted over learning behaviours, resources and conditions. As participants actively engaged with task demands, self-regulation emerged in vivo. Self-regulation was embodied in the unfolding interplay between task demands, available resources and participants’ deliberate attempts to gain control over task, through orientation, execution, and control (Gal’perin, 1989).

First, orientation was characterised by clear statements encompassing descriptions of task environment, interpretation of the instruction, awareness of own knowledge and ability, goal-formation, consideration of information and resources, and expected progression. Second, execution was accompanied by verbalisation describing the actions before, during and after the actions being carried out. Third, control or evaluation entailed statements addressing levels of satisfaction of actions, references to limited results or failure to attain goals, especially in relation to one or more constraints, and remedial actions and modifications of initial goals.

In this study, all participants demonstrated self-regulation to varying extents in accordance with three dimensions of goal-directed action, namely, orientation, execution and control, advocated by Gal’perin (1989). Ideally, if a learner can successfully carry out a complete action which includes these three dimensions, then it can be said that the learning concepts or learning tools have been internalised. While the findings in this study show that orientation, execution, and control did lead to internalisation (as shown in participants’ use of verbalisation to acquire reading-to-write skills), they also show that orientation, execution, and control did not always follow neatly in successive order. In
addition, the quality of orientation was identified to be qualitatively different among participants in terms of the clarity of their goals, the level of focus on task environment, their attention to available resources and their knowledge of the writing topic, as shown in the cases of Chubby (Excerpts 6&7, pp. 198-199), Mathew (Excerpt 8, p. 226), and Rose (Excerpt 7, p. 249). Orientation, in turn, affected execution and control. As shown in Aoddy’s verbalisation, lack of orientation basis, evident in poor task representation, subsequently led to poor performance. Based on these findings, the study proposes a schematic diagram depicting the evolving, fluid, and dynamic nature of self-regulation.

**FIGURE 6.1: Self-regulation model**

This model proposes orientation as a point of departure for examining self-regulation. The broken arrow (bottom-left corner) illustrates that the orientation basis is not always comprehensively formed. Orientation may depend on a variety of factors including existing internalised knowledge of various significances and varying types of development which may not have reached full maturation, for instance, incomplete understanding of citation practice by Aum and inability to paraphrase by Rose. The upward-pointing arrow above ‘orientation’ highlights the possibility that the orientation basis of an action may depend on object-, other- or self-regulation. As shown in this study, all participants relied on the task prompt for orientation, suggesting object-regulation. Other-regulation during orientation could be an instance whereby the researcher had to remind Aoddy to verbalise. For other task aspects, participants were able to set goals without being object- or other-regulated. For instance, Mathew set a goal to paraphrase based on his past learning experience which he himself realised to be significant.

Next, the model presents execution as a second dimension of action. As with the orientation basis, findings show that during execution, most participants demonstrated
varying types of regulation. During planning, for instance, Chubby made extensive use of the Toulmin’s model, suggesting object-regulation. Mathew was able to plan mentally and verbally without having to write his brainstorm, indicating self-regulation. Although not present in the data, due to the nature of self-sustained task performance in this study, in other class collaborative activities, other-regulation by the teacher or peers is conceivable during execution of an action.

Gal’perin’s third dimension of an action or control follows the execution as shown in the diagram. During control, all participants were object-regulated as they used the coherence SCOBA to check their writing. They were also other-regulated as they adhered strictly to the researcher’s instruction in that the SCOBA was only used during revision in the same way as the researcher had. Some participants demonstrated self-regulation in correcting grammatical errors without external assistance.

The fluid, evolving, and overlapping nature of the three types of regulation is illustrated by a number of curved arrows running over object-regulation, other-regulation and self-regulation relating to orientation, execution and control. The model also shows that these dimensions of an action do not always occur discretely and independently of one another. Arguably, these three dimensions of an action can occur in succession with one overlapping another. Also, the two-way arrows pointing backward and forward as seen in execution and control acknowledge the non-linear and recursive movements between these dimensions, emphasising that they may be retracted and returned to their previous aspect. For example, in this study, while attempting to support their argument or generating content, most participants returned to the source texts several times, suggesting execution returned to orientation and repeated orientation was needed. Also, an activity might be completed through actions moving forward and backward repeatedly between orientation, execution and control. As shown in Aoddy’s behaviour, all three dimensions were closely interfaced in that he relied on the self-questioning list for orientation, execution and control of his use of interrogative sentences.

The model of self-regulation proposed here, thus, reflects Vygotsky’s (1987) notion of functional systems in which different constituents interact and influence one another in complex and recursive ways both inwardly and outwardly. While purposeful orientation, execution and control carried out efficaciously may lead to internalisation and although internalised cultural practice helps form the basis of future orientation, the
transformative change in either direction is not always linear. Also, it is conceivable that internalisation may pertain to some aspects of activity while leaving other aspects less-regulated. It is also possible that internalisation may not be permanent and that after some time the individuals may not be fully self-regulated and rely on object- or other-regulation. For instance, once an action or activity is mastered, without being regularly used, the knowledge or skilled acquired may be lost. The model, therefore, illustrates these possibilities with an upward arrow from internalisation back to object-, other-, and self-regulation.

In sum, the self-regulation model shown above illustrates the notion that self-regulatory behaviours may vary depending on learners’ abilities to manage cognitive and metacognitive task demands, aided by speech, mediational tools and assistance from others, as supported by findings in this study. The notion that self-regulation is multifaceted, relative to task demands, and dependent on participants’ ability to problem-solve, as depicted in the above model, concurs with Aljaafreh and Lantolf’s (1994) regulation scale: (1) problem unnoticed; (2) problem noticed/unsolved; (3) problem noticed only under other-regulation; (4) problem noticed and solved with external assistance; and (5) problem noticed and solved with no external assistance, that is, mainly by self.

6.6 Limitations

An important limitation of the study is its limited number of case studies. In keeping with the qualitative research method, manageable sample size is required in order to permit comprehensive treatment of data and in-depth analysis. While case studies allow in-depth qualitative analysis, the researcher acknowledges that findings cannot be generalised to a larger ESL or EFL population. The aim of this research is, however, not to provide generalisations across the ESL/EFL context, but to gain insights into and to present specific accounts of the phenomena, namely, self-regulation of the participants in detail. A follow-up study with a larger number of participants could be a significant contribution to the field.

The second limitation concerns research bias. As a researcher, I acknowledge that I bring my own perspectives to this research. To counteract this potential bias, I seek to
confirm my interpretation of data through member-checking, triangulation and peer-debriefing.

Another limitation involves a possible selection bias. Participation in the study was voluntary, therefore those volunteered might have had a significant level of motivation as they signed up for the research project. Furthermore, during the intervention, changes to participants’ normal classes were made as the university where data collection took place prepared for graduation. Consequently, several alterations were also made to the intervention class timetable, and only those whose timetables agreed and those highly motivated remained with the intervention. Due to the scope of this study, motivation was not included in the analysis. Future studies exploring the role of motivation in self-regulation could potentially render useful insights.

A fourth limitation concerns the nature of the writing task. In this study, writing was carried out under a non-exam condition. As participants were used to writing for grades, they might not have demonstrated the level of self-regulation they would otherwise have displayed had they been writing during an exam. In other words, the absence of grades may have affected participants’ engagement levels. In addition, participants were not used to timed-essay writing. Most writing in their normal learning context was done outside class time. As participants were asked to write within one and a half hours, the writing condition may have affected their performance and compromised the findings of this study.

Fifthly, the intervention duration of this study was limited due to the political unrest in Thailand at the time of data collection. A longer intervention would be desirable. For instance, microgenetic analysis of participants’ reading-to-write behaviour could be carried out first at mid-point and once more at the end of the intervention. This would allow a more comprehensive nature of self-regulation to be mapped.

6.7 Suggestions for future research

Several research studies could be conducted to further explore the questions addressed in this study. Possible areas of investigation are suggested as follows.

1. While the fundamental concept that language positively interfaces with cognition has been integrated into concept-based research, existing scholarly materials
show lack of evidence that verbalisation has been explicitly mediated. Researchers should consider including explicitly trained verbalisation to inform the design and development of intervention programmes.

2. Participants in the current study included individuals with varying learning goals. Participants also differed in terms of their existing writing contexts and needs. In future studies, it would be desirable to increase the number of demographically similar participants who share similar needs and goals. Additionally, it would be useful for future studies to explore the relationship between students’ ZPDs and self-regulation.

3. One-to-one student-teacher writing conferences could be included as another research instrument.

4. In this study, a semi-structured interview was conducted at the end of the intervention. Future researchers could conduct pre- and post-intervention interviews so as to gain access to richer data. Specifically, interview questions could include gauging existing knowledge of key concepts to be introduced during the intervention. For instance, participants could be asked to give their definitions of coherence, argumentation, and discourse synthesis. Following the intervention, participants could be asked the similar questions. Comparing pre- and post-intervention interview data could result in more comprehensive insights into how participants develop their theoretical understanding of the concepts.

5. This study depended primarily on data informed by participants. Future research could include interviewing academic staff and possibly examine reading and writing course outlines as additional data sources.

6. Future researchers could extend the intervention period, thereby allowing for prolonged engagement and more opportunities for participants to rehearse newly acquired skills.

6.8 Conclusion

The present study has sought to understand mediated mind in action during real-time engagement as five participants completed a writing-from-sources task with tools provided. Grounded in the SCT tradition and adopting the microgenetic analysis, the
study captures the participants’ conceptual development as it unfolds and not after the point of maturation.

This research is premised on the notions that self-regulation has its genesis in social interaction and that conceptual formation occurs when a concept is suitably mediated via the process of internalisation aided by verbalisation and learning materials. The findings from this study advocate the critical role of speech in self-regulation.

The study provides empirical evidence of how speaking, reading and writing can be integrated to promote learning and development. It also emphasises the role of the teachers as mediators in organising the types and levels of support and learning tools available so that learners emerge from the instruction less teacher-dependent and more self-regulated.
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APPENDIX A
CONSENT FORM FOR PARTICIPANTS

A STUDY OF THE EFFECTS OF TEXTUAL COHERENCE ANALYSIS AND METACOGNITIVE STRATEGY TRAINING ON DISCOURSE SYNTHESIS TASKS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-

1. My participation in the project is entirely voluntary;
2. I am free to withdraw from the project at any time without any disadvantage;
3. The data audio-taped will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which they will be destroyed;
4. This project will include both questions which have been predetermined and those which cannot be anticipated by the researcher as these questions will be derived from my self-reflection form;
5. There is unlikely to be any hazards, inconvenience, or danger involved in this project;
6. No payment will be made for my participation;
7. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity.

I agree to take part in this project.

.....................................................................    ......................
(Signature of participant)               (Date)

This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 00-64-3-479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
APPENDIX B
METACOGNITIVE READING STRATEGIES QUESTIONNAIRE

Instruction: There are 22 items in this questionnaire. Please think of strategies you use during reading, and for each item, choose the answer which closely describes your reading behaviour. You may use your dictionary or ask the researcher at any time.

1. As I am reading, I evaluate the text to determine whether it contributes to my knowledge/understanding of the subject. I ______use this strategy.

   ___ never
   ___ rarely
   ___ sometimes
   ___ often
   ___ always

2. After I have read a text, I anticipate how I will use the knowledge that I have gained from reading the text. I ______use this strategy.

   ___ never
   ___ rarely
   ___ sometimes
   ___ often
   ___ always

3. I try to draw on my knowledge of the topic to help me understand what I am reading. I ______use this strategy.

   ___ never
   ___ rarely
   ___ sometimes
   ___ often
   ___ always
4. While I am reading, I reconsider and revise my background knowledge about the topic, based on the text’s content. I _____use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

5. While I am reading, I reconsider and revise my prior questions about the topic based on the text’s content. I _____use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

6. After I read a text, I consider other possible interpretations to determine whether I understood the text. I _____use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

7. As I am reading, I distinguish between information that I already know and new information. I _____use this strategy.

___ never
8. When information critical to my understanding of the text is not directly stated, I try to infer that information from the text. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

9. I evaluate whether what I am reading is relevant to my reading goals. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

10. I search out information relevant to my reading goals. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
11. I anticipate information that will be presented later in the text. I _______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

12. While I am reading, I try to determine the meaning of unknown words that seem critical to the meaning of the text. I _______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

13. As I read along, I check whether I had anticipated the current information. I _______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always
14. While reading, I exploit my personal strengths in order to better understand the text. If I am a good reader, I focus on the text; if I am good with figures and diagrams, I focus on that information. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

15. While reading, I visualize descriptions in order to better understand the text. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

16. I note how hard or easy a text is to read. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

17. I make notes when reading in order to remember the information. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always
18. While reading, I underline and highlight important information in order to find it more easily later on. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

19. While reading, I write questions and notes in the margin in order to better understand the text. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

20. I try to underline when reading in order to remember the information. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always
21. I read material more than once in order to remember the information. I use this strategy

___ never
___ rarely
___ sometimes
___ often
___ always

22. When I am having difficulty comprehending a text, I re-read the text. I ______ use this strategy.

___ never
___ rarely
___ sometimes
___ often
___ always

APPENDIX C
PERSONAL INFORMATION QUESTIONNAIRE

Name (in Thai):
________________________________________________________________________

Name (in English):
________________________________________________________________________

Phone: _______________ Email: __________________________

Age: _____________ Gender:   Female ____        Male ____

Faculty________________________    Degree: _________________________

Major: __________________________________________________________

Languages Spoken

First language: _____________ Second language: ______________

Third language: ________________ Forth Language: ______________

English Background (indicate hours per week)

Pre-school: _______________________________________________________

Skills emphasised: Speaking      listening     reading    writing     grammar   vocabulary

Skills preferred: Speaking      listening     reading    writing     grammar   vocabulary

Skills good at:  Speaking      listening     reading    writing     grammar   vocabulary

(Indicate 1-5, 1 =highest/most, 5 =lowest/least, write the number above the skill)

Primary:

Lower Primary: _______________________________________________________

Upper Primary: _______________________________________________________

Skills emphasised: Speaking      listening     reading    writing     grammar   vocabulary

Skills preferred: Speaking      listening     reading    writing     grammar   vocabulary

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Skills good at: Speaking    listening    reading    writing    grammar    vocabulary

Secondary:

   Lower Secondary: _________________________________

   Upper Secondary: _________________________________

Skills emphasised: Speaking    listening    reading    writing    grammar    vocabulary
Skills preferred: Speaking    listening    reading    writing    grammar    vocabulary
Skills good at: Speaking    listening    reading    writing    grammar    vocabulary

Tertiary

   First year: _________________________________

   Second year: _________________________________

   Third year: _________________________________

   Forth year: _________________________________

This term: _________________________________

Skills emphasised: Speaking    listening    reading    writing    grammar    vocabulary
Skills preferred: Speaking    listening    reading    writing    grammar    vocabulary
Skills good at: Speaking    listening    reading    writing    grammar    vocabulary

**English Subjects /Courses Attended This Term** (indicate hours per week, and T-Thai teacher speaking Thai, TE-Thai teacher speaking English or F- Foreign teacher)

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

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Learning Behaviour (as an individual student in class)

Pair Work & Group Work (attitude and role as a group member)

English Language Learning Problems
Key Areas You Wish to Improve:

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

Additional Comments

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
APPENDIX D
SEMI-STRUCTURED INTERVIEW QUESTIONS

Starting the interview:

The researcher:

“Thank you for agreeing to talk with me to day. As you know, the purpose of this interview is for you to tell me about your feelings, attitudes and learning habits. This information will help me understand how you learn English with regard to reading and writing skills and how you have carried out your reading and writing tasks during this project. This interview will also give me a chance to check with you some of the statements your have written in your reflective journal. This is to make sure that I understand what you would like to tell me the way you intend it to mean.

Before we begin, I’d like to tell you that there are 30 questions on my list. There is no time limit for this interview. You are welcome to talk as much as you would like about what you feel important to you and relevant to the questions. If any of the questions is unclear to you and you would like clarification, further explanation or examples, please let me know. Likewise, I may ask you to add more detail to your answers at times.

As we have agreed, this interview is being recorded and you will remain anonymous. If you would like a short break, do not hesitate to tell me and I will stop recording. We will return to the interview and recording when you are ready.”

Part A: Self-regulation, goals, motivation and self-efficacy

1. What are your study goals for this year and this semester?
2. Why did you volunteer to participate in this research?
3. Are you satisfied with the way it has turned out for you? Why and why not?
4. What makes a good learning environment for you?
5. Do you plan or structure your learning?
6. How important is it to be receptive and responsive to learning opportunities?
7. Do you seek more learning opportunities outside class time?
   If yes, what do you normally do?
8. Do you plan ahead of tasks, for example, before coming to class, before your exam?
   If yes, what do you do?
9. What is your attitude towards English reading and writing?
10. Do you normally feel positive that you can complete your reading and writing tasks well?
11. Can you tell me how you stay motivated while reading and writing?

12. What are some of the strengths you already have that helps you do well while reading and writing?

**Part B: Questions on metacognitive reading strategies**

13. How important is it for you to have reading purposes?

14. Do you find the reading tasks in this project difficult? If yes, what makes reading difficult for you?

15. What is the biggest influence on your reading ability?

16. As you read, what do you do when you feel you are not doing as well as you expect?

17. Is there anything that might distract you while you read? What do you do?

18. How often do you seek to improve your reading skills? What do you do?

19. What reading strategies do you normally use?

20. What do you do to modify, repair, and improve your plans or action during reading?

21. While you read, what helps you decide which information in your reading texts should be used in your writing?

**Part C: Questions on metacognitive writing strategies**

22. How important is it for you to keep in mind the type of writing task you have to complete after reading?

23. Do you find the writing tasks during this project difficult? If yes, what makes writing difficult for you?

24. What is the biggest influence on your writing ability and style?

25. As you write, what do you do when you feel you are not doing as well as you expect?

26. Is there anything that might distract you while you write? What do you do?

27. How often do you seek to improve your writing skills? What do you do?

28. What writing strategies you normally use?

29. What do you do to modify, repair, and improve your plans or action while writing?

30. While you write, what helps you decide which information in your reading texts should be used in your writing?

At this point, statements from the interviewee’s self-reflection form which need to be clarified will be discussed. The questions for this part of the interview will vary depending on what each participant has written in their reflection.
Throughout the interview, the researcher uses the following elaborating probes to encourage the interviewee to speak more (Cresswell, 2005, p. 218).

- “Tell me more.”
- “Could you explain your responses more?”
- “I need more detail.”
- “What does ‘not much’ mean?”

**Closing the interview:**

The researcher: “I think that’s about it. I have no more questions to ask, except this last one. Is there anything else about reading and writing that you would like to share with me – anything we haven’t talked about that you think should be included when I write my report?”

Thank you very much for your time today.

------------------------------------------
Lesson Plan: Week One

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Rationales / Objectives/Description</th>
<th>Materials/activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning as a social experience</td>
<td>In this first week, I intend to get to know my learners, finding out about their learning environment, learning styles, general learning goals, preferences, beliefs, needs, and wants. Learners are encouraged to talk about their previous learning experience. I will also be sharing my experience with them. My goals are to draw learners’ attention to their role as members of the academic community, to understand participants’ learning context, and to build rapport with the class.</td>
<td>Shared experience/Class discussion on learning experience and process writing Metacognitive Questionnaire (using collective results and strategies listed as items for discussion and scaffolding activities) Learning is mediated by tools (questionnaires, learners’ language and teacher’s speech). Class members and the teacher contribute to scaffolding process by sharing, encouraging, and seeking clarification. Reading on ‘Being a Successful Tertiary Student’ Some pictures and synthetic animal figurines used as speaking prompts for verbalisation Self-questioning and self-instruction sheets Pair work on ‘inferring’ – Apartment, discourse synthesis introductory task Self-reflection form to be filled after task Researcher’s Note: I will keep an open mind and get to know the class as I meet with them. I am also keen to find out whether the results of the proficiency test will match up with the learners. I understand that test performance and classroom behaviour can sometimes give different perspectives and perceptions of what learners are able to do in the target language.</td>
</tr>
<tr>
<td>learning goals, and learning strategies</td>
<td></td>
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<tr>
<td>Self-regulation</td>
<td></td>
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<tr>
<td>Verbalisation</td>
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<tr>
<td>Process writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discourse Synthesis</td>
<td>Later in the week, the results of the strategy questionnaires will have been concluded. I will use the questionnaires as a springboard for this week’s concepts to revisit goal-setting exercise discussed in the first session and to relate goals to reading and writing in EAP context. Discourse synthesis at sentence-level is introduced. <strong>Note:</strong> The class met 3 times this week: 27/8/10; 29/8/10 (am); and 29/8/10 (pm). All were 3 hours sessions.</td>
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</tr>
</tbody>
</table>
Lesson Plan: Week Two

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<tr>
<th>Concepts</th>
<th>Rationales/ Objectives/Description</th>
<th>Materials/Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbalisation; (Revisited)</td>
<td>During this week, extensive modelling and practice of verbalisation will take place. My goal is to familiarise learners with the concept of verbalisation as a form of self-regulation and as a key component of their learning strategies. Learners are encouraged to use verbalisation as much and as often as possible. Writing at paragraph level is introduced. Learners are encouraged to set writing goals and use a variety of techniques to develop a paragraph. Argument topics can be suggested by the class. Also, my goal is to observe how much learners already know about textual coherence and rhetorical organisation of argument essays. To cater for personal variables and different paces of learning, I am preparing a selection of tasks, as not every learner will be working on the same concept or identical exercise. Learners will be made aware of teaching goals and rationale behind this practice. <strong>Note:</strong> The class met 3 times this week: 3/9/10; 5/9/10 (am); and 5/9/10 (pm). All were 3 hours sessions.</td>
<td>Old-to-New concept  Sequential Progression A &amp; B and Topical Structure  Coherence SCOBA (Class discussion followed by pair work and individual verbalisation of the SCOBA)  Class discussion on Toulmin’s model  Pair work: ‘Do you agree with the following statements?’  Text on ‘Banning an Ivory Trade’: reading followed by pair discussion on textual coherence of this text, brief summary presented by students followed by class discussion  Argument Essay Self-Revision Checklist  Class discussion and Reading on audience awareness (Catherine’s work for overseas trip)  Individual and group writing task on ‘environment and why I like Mary’  Self-reflection form to be filled after task  Researcher’s Note: Short activities carried out during this week will scaffold the concepts of coherence and argument genre.</td>
</tr>
</tbody>
</table>
### Lesson Plan: Week Three

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Rationale/Objectives/Description</th>
<th>Materials/Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textual coherence</td>
<td>In this third week, textual coherence and argument genre are delivered concurrently to ensure maximum learning benefits and application. My goal is to emphasise the concept that writing is a social act and not a linear process.</td>
<td>Short teacher-generated passages written on whiteboard for coherence analysis Class discussion: A birthday party at KFC vs party at home with Thai food, using verbalisation Reading on ‘Skill or Strategy’ Coherence SCOBAs Toulmin’s model</td>
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<tr>
<td>Rhetorical organisation</td>
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<tr>
<td>Argument essays</td>
<td>After a 2 weeks of warming-up period, the class should be more receptive and ready to concentrate on these two concepts. Also, I will have had a chance to gauge learners’ English proficient and become more aware of their learning styles and strategy preferences.</td>
<td></td>
</tr>
<tr>
<td>Toulmin’s Argument System</td>
<td>Learners are encouraged to use verbalisation during error correction and reading &amp; writing activities. Although only correction at sentence level will be carried out, this is a good warm-up exercise leading to the concept of revision in the following week.</td>
<td>Applying the Toulmin’s System “Should Hatyai become a wireless city?”</td>
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<tr>
<td>Facts &amp; Opinions</td>
<td>This is a good time to revisit some strategies and practise verbalisation with SCOBAs.</td>
<td></td>
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<tr>
<td>Process-Genre writing</td>
<td>The concept of writing as a social act is linked with audience awareness and goal setting. Each key sections of an argument essay will be used in discussion on goal-setting from both the reader’s and writer’s point of view. Also, learners are encouraged to set personal goals with regard to strategy use and reading and writing purposes.</td>
<td>Text ‘Is the Internet a vital communication tool for the 21th century?’ Discussion and Reading on audience awareness (Catherine’s work for overseas trip) Reflective writing: ‘Why is writing difficult for me?’ Researcher’s Note: Writing tasks increase in intensity. Students are required to write longer texts on more complex current issues.</td>
</tr>
<tr>
<td>Audience awareness</td>
<td>Main idea and topic sentence of texts provided by myself will be identified. Learners will also write their own paragraphs. These will be revised by authors before being passed to other students. Reader’s and writer’s goals will be discussed in relation to the message in each paragraph. Self-reflection form is introduced to class and completed by students.</td>
<td></td>
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<tr>
<td>Learning strategies</td>
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<tr>
<td>(Revisited)</td>
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<tr>
<td>Goal-setting</td>
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<tr>
<td>(revisited)</td>
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<tr>
<td>Verbalisation</td>
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<tr>
<td>(Revisited)</td>
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</tbody>
</table>

**Note:**
The class met 3 times this week: 9/9/10; 10/9/10 (am); and 10/9/10 (pm). All were 3 hours sessions.
## Lesson Plan: Week Four

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Rationale/Objectives/Description</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process-writing (Revisited)</td>
<td>Most topics are carried through from previous weeks. My goal is to reintroduce the importance of planning, revising and rewriting to EFL learners, and present these concepts as prerequisites leading to the completion of the final piece of writing. It is important for learners to realise that revision is not a task to be attended to only after having completed their writing or after receiving feedback from the teacher.</td>
<td>Class discussion on main idea, summarisation, paraphrasing, and error correction, followed by exercises on whiteboard (teacher- and student-generated sentences)</td>
</tr>
<tr>
<td>Reading for main ideas, note-taking, summarisation, paraphrasing techniques, and error correction</td>
<td>The other teaching goals for this week are to provide opportunities for students to practice and work with greater confidence and fluency, to prepare students for more complex end-of-project reading and writing task, to introduce the rhetorical organisation of argument essays to the class, to raise students’ awareness of the differences between verbal and written arguments. Additional teaching goals are to remind students of the writing process and to raise students’ awareness of the recursive writing process and the importance of writing multiple drafts.</td>
<td>Paraphrasing &amp; Summarising worksheet Individual work and group work using verbalisation while analysing text on ‘Home Safety’ (Students to identify and rewrite where incoherent text is found)</td>
</tr>
<tr>
<td>Verbalisation (Revisited)</td>
<td>Students are encouraged to set revision goals. Students will complete a self-reflection form at the end of each task. Note:</td>
<td>Class discussion/student feedback on the use of reflection form and verbalisation</td>
</tr>
<tr>
<td>Goal-setting (Revisited)</td>
<td></td>
<td>Coherence SCOBAToulmin’s modelExercise on ‘Other and its forms’</td>
</tr>
<tr>
<td>Inter- and intra-sentential linkers</td>
<td></td>
<td>Parallel structure Citation guidelines</td>
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<tr>
<td>Textual coherence</td>
<td></td>
<td>Sample email</td>
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<tr>
<td>Revising and editing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plagiarism</td>
<td>The class met twice this week: 17/9/10 (am); and 17/9/10 (pm). All were 3 hours sessions. Recordings of the end-of-project discourse synthesis task were carried out outside class time. Each participant completed this individual final writing task with only the researcher present.</td>
<td></td>
</tr>
</tbody>
</table>

Note: The class met twice this week: 17/9/10 (am); and 17/9/10 (pm). All were 3 hours sessions. Recordings of the end-of-project discourse synthesis task were carried out outside class time. Each participant completed this individual final writing task with only the researcher present.

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APPENDIX F
COHERENCE SCOBAL

Do each paragraph have a topic sentence?

No

Yes

Is the topic sentence well-supported?

No

Yes

Are the sentences logically connected?

No

Yes

Are pronoun references easy to follow?

No

Yes

Does your paragraph say what you want it to say?

No

Yes

(If you’ve written more than one paragraph)

Does each new paragraph begin with old information?

No

Yes

Follow the ‘One paragraph = One main idea’ rule. Write your topic sentence to show your intention and sum up what you are going to tell your readers. See note A.

State your position clearly then give evidence, definitions, examples, and statistic. Explain your point of view. See note B.

Check sequential progression and topical structure. Check your transitions. Rearrange your sentences. Use sentence linkers. Try new conjunctions. Read aloud. See note C.

Check distance between items. Shorten and/or rearrange your sentences. See note D.

Check word choice, sentence length, repetition, ellipsis. Check sentences for subjects and main verbs. Read aloud. Reread. Repeat the above steps in this SCOBAL. See note E.

Link preceding and following paragraphs. Check how you’ve ended the previous one. Make reference to the last point you made in the new paragraph. Rewrite your topic sentence. Read aloud. See note F.

You have written a coherent paragraph. Congratulations!

Congratulations!
Notes for Coherence SCOBA

“Coherence is a natural or logical order which makes sense and is easy to understand. At sentence level, coherence refers to the order in which the words are arranged within each sentence. It is lacking if the arrangement causes misinterpretation. At paragraph level, coherence means that sentences within a paragraph relate to one another in such a way that ideas develop smoothly and logically. Also, related paragraphs within a larger piece of writing flow smoothly from one to another” (Pinner & Pinner, 1990, pp. 100-101).

Note A:

A well-written paragraph should deliver only one overall concept. This key concept is normally stated in the first sentence which is called a topic sentence. Following this topic sentence are sentences containing supportive information. All information in the same passage should draw readers’ attention back to the key concept or main idea in the topic sentence at the beginning of the paragraph.

The topic sentence, thus, contains the most important information in the paragraph and sums up what the whole paragraph is about. Although it is usually found at the beginning of a paragraph, a topic sentence can sometimes be at the end or even in the middle. The topic sentence tells readers what to expect from the paragraph while the other sentences in the paragraph are added to support the topic sentence.

Note B:

For a paragraph to be coherent, every sentence in the paragraph must be logically connected and related to one main idea. In an argument text, the main idea is the position taken by the writer or the writer’s claim. This claim is usually stated in the topic sentence which is the first sentence in the paragraph. It is what the writer believes to be the best argument or action and what the writer tries to convince the readers. Supporting sentences are given in the rest of the paragraph as evidence to strengthen the writer’s claim.

In persuading readers to agree with his/her claim, the writer must give evidence and relevant information to support the claim statement (in this case - the topic sentence). Good evidence usually comes from expert opinions of knowledgeable people with great insights on the topic being debated, official records, and statistic from official reports. Evidence may also include examples and facts.

Note C:

Once you have gathered enough relevant evidence to justify and support your claim, make sure you organise your ideas and present this information logically. Use appropriate conjunctions to link similar information or sentences. If you are presenting contrasting opinions or statements, use correct conjunctions to indicate opposite ideas accordingly. As well, you may use transitional markers to aid the flow of information. This will make your writing read more smoothly and the readers will be able to understand it better. Furthermore, reading the text out loud and listening to your own voice can help you decide whether your writing ‘sounds right’. The sentences may be well-written, but if they are not well-positioned, they may not serve...
you well. If different ideas are not well-connected or some of your sentences are not in the right place, the text will appear jumpy or jerky. Rearrange the sentences and read again. Double check the use of conjunctions and transitional markers. Be prepared to do this more than once.

Note D:

Using pronoun references effectively is one of the most difficult skills to master. The difficulty could result from the distance between the item first mentioned (for example, John or Susan and Jimmy) and the pronoun used to refer to that item (for example, he or they). If there are too many ideas or sentences in between the items (between John and he), readers may not be able to identify the original noun and cannot work out what the writer is referring to. Therefore, it is important to make sure that these two items (John and he) are located within reasonable distance from one another.

Note E:

Word choice: Choose your vocabulary carefully, particularly with synonyms (words of similar meanings) and antonyms (words of opposite meanings) when making references and substitutions (see next page).

Sentence length: Long sentences are confusing and difficult to read. On the next page is the speech given by President John F. Kennedy to welcome a group of AFS students. It was far too long and too complicated for foreign students to understand. Here, you can read and reread the text many times. Still, you may find it difficult to follow. Imagine yourself listening to this speech all in one go. How much do you think you can understand this speech if you only listen to it once?

AFS

“This effort to bring you to the United States has not been made merely to give you an interesting year. It has been made because judgement has been reached that you will be among the future leaders of your country, that you carry with you a sense of responsibility and commitment, and that when you go home you will not be a friend of the United States but rather a friend of peace, a friend of all people, that you will desire to see good will among all nations and that you will stand in your community, in your state, and in your country for those principles which motivate us all around the globe – a fair chance for everyone and also for a world in which we have some hope for peace.”

(US President John F Kennedy, speech to AFS students, July 1963.)

Repetition: Repetition can be useful in reminding readers of ideas already mentioned. Repeating or mentioning the same items once or twice may aid
understanding, but repetition overuse can be unnecessary, annoying, and confusing. To avoid using the same words over and over, a writer may substitute these words by different words. Effective substitution usually results in shorter words. For example, the writer may use the word ‘my cousin’ to replace ‘the daughter of my uncle’.

**Ellipsis**: Ellipsis helps eliminate unnecessary repetition and wordiness. It occurs when an item is omitted. This means the word previously mentioned is left out completely. It is replaced by nothing. See the following example.

I bought two books. One is for John and the other Cynthia.

Original idea:

I bought two books. One (book) is for John and the other (book is for) Cynthia.

You should take care not to leave out too many words as this could make your sentence ungrammatical. When using ellipsis, think of your readers. Make sure your readers have enough information to go on.

If the writer takes for granted that the readers have enough background knowledge of the topic, the writer may leave out a large chunk of information. Leaving out information may lead to an incoherent text which in turn leads to readers’ comprehension breakdown. The writer may have all the information in his head and thinks that the text is coherent, but because some information has been left out, the readers may not be able to follow the text properly. To the readers, the text is incoherent.

**Note F**: A good paragraph introduces only one main idea. The main idea can be found in the topic sentence and is supported by the sentences in the rest of the paragraph. In writing an argument essay, for example, you are required to write 4-5 paragraphs altogether. Each of these paragraphs should have its own main idea and supporting evidence. When you want to write about a new main idea or a new argument, you must begin a new paragraph.

Writing a multiple-paragraph essay, however, is not easy. Each new paragraph should have some connection with the previous one. Good writers create a smooth transition from one paragraph to the next to help readers link the previous main idea to the new main idea which is coming. Placing familiar information at the beginning of the new paragraph is an effective way to create the flow of information and aid comprehension. On the contrary, if these paragraphs are not well-written and not well-organised, the text will not be easy to read.

-----------------------------------------------
APPENDIX G
COHERENCE ANALYSIS EXERCISE

Instructions:

- Work with your partner(s).
- Read the paragraph on Home Safety.
- Use self-questioning and self-instruction.
- Ask your partner some questions and decide what your group should do.
- Use your Coherence SCOBA.
- Use your topical progression sheet.
- Discuss whether the following paragraph is coherent.
- If yes, can you or your partner(s) say what makes it coherent?
- If the text is not coherent, discuss how you can improve it.

Home Safety

It is important to lock your house before you go out. Many people worry about their belongings left unguarded at home while they are at work. For your own safety you should check that all your doors and windows are locked before going to bed as well. During the day, several strangers may come to your house while you are not there. Some are food vendors. These are usually good, honest, hard-working people bringing their goods right to your front door. Others are those disguised as merchants who are in fact criminals pretending to sell something while checking out how to gain access and how to escape from your home. Tell your neighbours if you plan to be away for a few days. It is better to be safe than sorry. It is your responsibility to ensure the safety of your life and your property. Ask someone you can trust to check your mail. If your mail box is not cleared regularly, this is a sign that there is no one home. These people may have been watching your house for some time now and they are ready to attack the moment you turn your back. The crime rate is increasing and you can’t leave it to police to deal with the problem once it has happened. Make sure your house is securely locked and there is nothing that will attract attention of those passing your place.
APPENDIX H
THE TOULMIN’S MODEL

Claim → A statement of position, main idea, thesis, main argument, and main assertion (what you are trying to convince your readers)

Ground → A statement of evidence to support and justify your claim (data, statistic, information from other sources such as expert opinions or official reports)

Warrant → A statement of principle or virtue, believed and accepted by most people (used to demonstrate how data of grounds are relevant or linked to the claim, can sometimes be left out of your writing if it is fully accepted and not debatable)

Rebuttal → A statement of possible exceptions to claims (recognising opposite viewpoints and possible objections)

Backing → A statement of evidence to support your warrant (data, statistic, and information from other sources such as expert opinions or official reports)

Qualifier → An indication of degree of truth (probably, likely, maybe etc.)

<table>
<thead>
<tr>
<th>Claim</th>
<th>Ground</th>
<th>Warrant</th>
<th>Rebuttal</th>
<th>Backing</th>
</tr>
</thead>
<tbody>
<tr>
<td>The university should provide more drinking water to students (because there is a shortage of free fresh water supply for student consumption).</td>
<td>There are not enough drinking water outlets on campus. Properties report data show that there are only 7 water outlets provided for 3,500 students. This equates to 1:500 outlet/student ratio (Suwan, 2009, pp. 21-22). Therefore, students need more fresh water readily available to them preferably at least one on each floor of every building.</td>
<td>Water is good for our health. Our bodies need water to function properly. Without enough water in our bodies, it is likely that we will not feel well enough to learn.</td>
<td>Not all existing water outlets are used and none of them is empty at the end of the day. This could be because they are not conveniently located. Students do not use these often enough and end up buying unhealthy drinks from the cafeteria. Therefore, increasing the number of outlets and relocating the existing ones will probably be a good idea.</td>
<td>According to WHO, water makes up to ......% of our bodies (WHO, 2004, p. 10). The 2008 Harvard University Health Survey reports that without enough water in our bodies we will be dehydrated. This condition can lead to low concentration, severe headaches and extreme tiredness (Smith, 2008). Dehydration certainly does not promote good learning.</td>
</tr>
</tbody>
</table>
APPENDIX I
SELF-QUESTIONING LIST

What is this text about?  What is the title?
Have I read this before?  Who wrote it?
Do I know this author?  What does the title tell me?
What type of story is it?  How much time do I have to read this?
What do I know about this story already? Can I guess what the text is about?
How does this text relate to the first/second that I’ve read?
What does the introduction say?  Should I read this part first?
What is the meaning of this word?  Do I know this word?
What does this word/sentence mean?  Can I guess it?
Why is this sentence so long?  What does it actually say?
What does the paragraph say?  Can I summarise this?
Does it make sense?  Why is it difficult to understand?
Do I have to answer this now?  How can I work this one out?
What does the next paragraph say? Can I find the answer in the next section?

What is the main verb of this sentence?  Who/where is the main subject?
Have I got everything right?  What have I missed here?
What is the main idea of this paragraph?  Will I need this information later?
Do I need to understand this now?  Do I need to write this down?
Is this true? Can I trust the writer?  How does he know this?
Is this information important?  Can I skip this?  Can I use this?
Can I come back to this?  What should I do? Can I read it again later?
Did I understand this well?  Where have I seen this before?
What does this word refer to?  Do I understand it correctly?
Is this good enough?  Have I finished with this text?
What else do I need to know?
APPENDIX J
SELF-INSTRUCTION LIST

I should read this first.
It’s a good time to summarize this.
It’s better if I do this now.
I don’t need to read every word.
It doesn’t matter. Just forget it.
I will skim read first. I will make a list first.
I should do it now. I should do it later.
Not now, I don’t have time.
This is not important. I can skip this. This is good already.
I know this already. I need to remember this.
I should read this again.
I can ask the teacher later.
This doesn’t make sense. I must read it again.
I should check this. I should use the dictionary.
I have to finish this first. I must do it now.
Maybe I can break this sentence into smaller sentences.
I can draw a line here. I can link these two words together.
I can use this answer. I can put this here.
I don’t need to know this now. Just skip it.
Ok, I will circle the main verb. I should make it clear.
I can find the answer later. I will put this information in my writing.
I should ignore this. This is not true. This is the writer’s opinion.
I don’t agree with this. I should write my opinion here.
I don’t need to check it again. I will make a list of similar information.
I will ignore this. I will cross this out. I can use this sentence. I should rewrite this.
APPENDIX K
ARGUMENT ESSAY SELF-REVISION CHECKLIST

1. Are all major sections (introduction, body, and conclusion) well-proportioned?
2. Does the introduction clearly lead to the main argument of your essay?
3. Does the introduction clearly reflect key concepts in the essay instruction?
4. Have you used language appropriate to your audience/readers?
5. Does each paragraph present only one key concept/idea?
6. Does each paragraph show links between your claims and information in source texts?
7. Is the information in each paragraph well linked and logically arranged?
8. Is each of your claims clearly stated?
9. Are these claims specifically related to your argument and the essay instruction?
10. Are there sufficient facts, examples, evidence to support your claims?
11. Do these facts serve well to support your position/claim/argument?
12. Are your supporting ideas well written, logical and convincing?
13. Do you want to elaborate any of your supporting ideas?
14. Do you want to add more supporting ideas?
15. Do you want to delete any information you don’t need?
16. Do you want to replace any information?
17. Have you considered opposite views to your claims?
18. Does your essay cover all key concepts in the essay instruction?
19. Does your conclusion effectively round up your argument?
20. Does your essay comply with the word limit?
21. Have you paraphrased, cited and acknowledged source texts appropriately?
APPENDIX L
READING-TO-WRITE TASK PROMPT

Introduction

Most parents would like their children to stay out of trouble, but it is difficult to find a child who doesn’t do anything wrong. Children do get into trouble from time to time and they are told off or punished when they misbehave. While some people avoid physical punishment and will not smack their children, others still believe that smacking or hitting is a way to show parental love.

Your Tasks

1. In relation to the above introduction, read the following statements.

   “Spare the rod, spoil the child” is an English proverb which means if you do not punish a child when he does something wrong, he will not learn what is right (if you don’t use a stick to hit a child, he will be out of control). In Thai, we say “Rak Wua Hai Pook, Rak Look Hai Tee” or if you love your bull, then you must tie it up (chain it), and if you love your child, you must discipline him by smacking him.

   Do you think these old statements are still appropriate nowadays?

   Now, consider the following options. Choose A or B.

   A. Parents can and should smack children to teach them what is right and what is wrong.
   B. Smacking children is a form of violence and should be made illegal.

   If you cannot decide, you may wait until you have more information. You can also change your mind after reading.

2. Next, read Text A, Text B and Text C on the following page. These passages give information about child discipline. Read them carefully. Use the information in the passages to support your argument.

3. Plan your writing, organise your ideas and write a coherent paragraph on what you have decided (A or B). Make sure you state your position clearly. Give supporting evidence and further information. Think of what and how other people may disagree with you. Your paragraph should have at least 7 sentences. Write at least 2 drafts.

4. When you use the information from your reading in your writing, try not to copy the words from the passages directly onto your paragraph. Write this information in your own words. If you copy, put the information in quotation marks, “..........”. You may read the passages as many times as you wish. You may also use your dictionary if needed.

5. Revise and edit your drafts carefully before giving all your writing to the teacher.

6. You have 45 minutes to write a paragraph or 1 ½ hours to write a 250-word essay.
**Text A**

**Discipline**

If your child is punished for something he didn’t do, he begins to see punishment as unfair, rather than a fair consequence to an inappropriate action. It gives the child no incentive to behave better, since he may end up punished whether he is following the rules or not.

Punishment itself is actually the least effective method of discipline. The most effective method is positive reinforcement—that is, making a point to let the child know that you notice efforts towards good behavior. Letting him know that he is doing things well boosts his confidence in himself and gives him incentive to continue to do well. A simple comment can do wonders, such as, “Johnny, I appreciate you sitting and reading quietly at the doctor’s office while you waited for me. Thank you,” or, “Judy, I noticed you put your toys away without me asking. That was very responsible of you.”


**Text B**

**What will help my child learn not to do it again?**

When your child becomes mobile you’ll find that he gets into everything. You can remove your child from the cause of trouble, but it’s often more appropriate to rearrange the environment to avoid trouble occurring in the first place. It may be impossible for your newly-standing child to ignore the temptation of a dangling tablecloth.

Punishment in the form of hitting is not recommended at all. It communicates the message that it’s all right to be aggressive and hit someone if you don’t like what they are doing. Remember that punishment is not discipline but a sign that discipline has been unsuccessful.


**Text C**

**Positive discipline: What it is and how to do it**

All people have basic rights. These rights apply to everyone regardless of race, colour, gender, language, religion, opinions, origins, wealth, birth status or ability. Not only do adults have human rights – children have rights too. But because children are small and dependent, adults often do not consider them to be full human beings with rights.

In 1989, world leaders approved a treaty that sets out the basic human rights of every child. They wanted to make sure that everyone in the world knows that children do have rights.

APPENDIX M
SELF-REFLECTION ON TASK PERFORMANCE AND STRATEGY USE

Instructions:

- Take a few moments and reflect on how you feel about your performance on today’s reading-to-write tasks. Think about your choice of strategies and the effectiveness of the strategies which you have used today.
- Please fill in the blank space under each of the prompts below. You may write in Thai or English or both, as little or as much as you want.
- If you have nothing to write, please say “I don’t know” or “I don’t remember.”
- If you wish, you may write additional comments on the last page.
- You may ask for my assistance any time while you are completing this form.

1. How do I feel about my reading tasks and my reading performance today?
   (a). These are things I think I’ve done well today as a reader.

   (b) There were things I struggled with while I was reading. In dealing with these issues, I used the following reading strategies.
(c) The following reading strategies worked well for me today.

(d) These reading strategies did not work well for me today.

(e) Looking back at my reading performance, there were things I think I could have done or strategies I could have used to improve my reading today.
However, I did not take these actions. I’ll keep them in mind and may use these strategies next time I read.

(f) These are things I should focus on when I read in order to write.

(g) What can I do outside class time to help me become a better reader? These are things I can do on my own or with friends and without my teacher’s help.

2. How do I feel about my wringing tasks and my wring performance today?
(a). These are things I think I’ve done well today as a **writer**.

(b) There were things I struggled with while I was writing. In dealing with these issues, I used the following writing strategies.

(c) The following writing strategies worked well for me today.
(d) These writing strategies did not work well for me today.

(e) Looking back at my writing performance, there were things I think I could have done or strategies I could have used to improve my writing today. However, I did not take these actions. I'll keep them in mind and may use these strategies next time I write.
(f) These are things I should focus on when revising my writing.

(g) What can I do outside class time to help me become a better writer?

These are things I can do on my own or with friends and without my teacher’s help.
Instructions:

- Write your additional comments on this page if you wish. You may write in Thai or English or both. Leave this page blank if you have nothing more to say.

Thank you very much for completing this self-reflection form. Please hand it in before leaving the room.
APPENDIX N
SEQUENTIAL PROGRESSION

Example A: Using sub concepts of key categories from the preceding sentences.

According to the results of a survey conducted by a government agency in the recent months, the price of grocery, among other products, has gone up at an alarming rate. Fresh food prices, for instance, have shot up over 20% causing many consumer-related concerns. Fresh meat in particular has become almost an unaffordable luxury to many families around the country. One-income families (with or without children who need to be fed, clothed and educated) seem to suffer the hardest.

Example B: Using the same key word/concept in a preceding sentence to generate the sentence which follows.

(1) Once a year, the District Library runs its most important fundraising event. (2) This event is meticulously organized by the library’s executive committee. (3) Every year, around the Easter holiday, the committee collects goods to be auctioned out. (4) The goods comprise various articles of furniture, tools, clothing, food, and plants donated by the people in the community.
## APPENDIX O
### VERBALISATION TRANSCRIPTION CONVENTIONS

<table>
<thead>
<tr>
<th><strong>Transcription</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Superscript</td>
<td>Operations as part of an action</td>
</tr>
<tr>
<td>(...)</td>
<td>Number of seconds during pause</td>
</tr>
<tr>
<td>IS Italics</td>
<td>Superscript IS, Reading the Instruction Sheet</td>
</tr>
<tr>
<td>A Italics</td>
<td>Superscript A, Reading text A</td>
</tr>
<tr>
<td>B Italics</td>
<td>Superscript B, Reading text B</td>
</tr>
<tr>
<td>C Italics</td>
<td>Superscript C, Reading text C</td>
</tr>
<tr>
<td>A1, A2, B1, B2, C1, C2</td>
<td>Text A paragraph 1, text A paragraph 2, …</td>
</tr>
<tr>
<td>Plain text</td>
<td>Verbalisation</td>
</tr>
<tr>
<td>//Plain text//</td>
<td>Silent writing</td>
</tr>
<tr>
<td>Italics and underlined</td>
<td>Formulating/Verbalisation before writing</td>
</tr>
<tr>
<td>“Italics in quotation marks”</td>
<td>Concurrent verbalisation &amp; writing</td>
</tr>
<tr>
<td>“Underlined Italics in quotation marks”</td>
<td>Read text written immediately after writing</td>
</tr>
<tr>
<td>“plain text”</td>
<td>Text translated from Thai to English</td>
</tr>
<tr>
<td>BS, D1, D2, D3</td>
<td>Brainstorm, Draft 1, Draft 2, Draft 3</td>
</tr>
<tr>
<td>IS</td>
<td>Instruction Sheet</td>
</tr>
<tr>
<td>ST</td>
<td>The Source Text (not specific A, B or C)</td>
</tr>
<tr>
<td>TM</td>
<td>The Toulmin’s Model</td>
</tr>
<tr>
<td>CS</td>
<td>The Coherence SCOBA</td>
</tr>
<tr>
<td>QL</td>
<td>The Self-Questioning List</td>
</tr>
<tr>
<td>SL</td>
<td>The Self-Instruction List</td>
</tr>
<tr>
<td>IU</td>
<td>The Internet Use Sheet</td>
</tr>
<tr>
<td>AC</td>
<td>The Argument Essay Checklist</td>
</tr>
<tr>
<td>SP</td>
<td>The Sequential Progression Sheet</td>
</tr>
<tr>
<td>Superscript → Superscript</td>
<td>Moving from one to the other</td>
</tr>
<tr>
<td>Superscript ↔ Superscript</td>
<td>Moving back &amp; forth between one and the other</td>
</tr>
</tbody>
</table>
Coding procedures:

1. Multiple reading of each transcription
2. Identifying and highlighting emerging themes
3. Devising a preliminary coding scheme
4. Multiple rereading of all transcriptions and highlighted themes
5. Completing coding and recoding of each transcription
6. Comparing, deleting, and refining themes across all transcriptions
7. Applying final coding schemes to all transcriptions

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>current learning context at the time of the intervention</td>
<td>information regarding subjects, major, and degree enrolled in</td>
</tr>
<tr>
<td>(during intervention)</td>
<td></td>
</tr>
<tr>
<td>motives and reasons for participation</td>
<td>Current and future academic, social and personal goals, (beyond the scope of this thesis/omitted in final coding and analysis)</td>
</tr>
<tr>
<td>(pre- and during intervention)</td>
<td></td>
</tr>
<tr>
<td>past learning experiences (pre-intervention)</td>
<td>information regarding goal-setting, reading and writing goals, teacher-learner relationship, type of feedback given in normal English class and preferred feedback type</td>
</tr>
<tr>
<td>existing reading and writing behaviours (pre-intervention)</td>
<td>prior knowledge of reading-to-write, argumentation, and coherence, class-based and home-based literacy, task conditions, preferred reading and writing styles, reading and writing strategies, understanding of reading-writing relationship, timed-essay, group work, individual work, and object-, other-, and self-regulated behaviours</td>
</tr>
<tr>
<td>reading and writing difficulties (pre- and during intervention)</td>
<td>issues affecting reading and writing performance, what the participants perceived as their shortcomings or areas to be improved</td>
</tr>
<tr>
<td>contradictions within and across activity systems (pre- and during intervention)</td>
<td>primary, secondary, tertiary and quaternary contradictions (beyond the scope of this thesis/omitted in final coding and analysis)</td>
</tr>
<tr>
<td>perceived developmental gains (during intervention)</td>
<td>description, explanation, and application of conceptual knowledge of concepts newly taught, attitudes and perceived difficulties, appreciation of course content and concept-based instruction, and what the participants think they have learned or how they have changed during the course</td>
</tr>
</tbody>
</table>
### APPENDIX Q
PRELIMINARY CODING FOR INTERVIEW PROTOCOLS

<table>
<thead>
<tr>
<th>Open Coding</th>
<th>Axial Coding</th>
<th>Selective Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Current reading &amp; writing task</td>
<td>• Goals</td>
<td>1. Motivation</td>
</tr>
<tr>
<td>• Intervention meets needs</td>
<td>• Motivation</td>
<td>- Motivation to</td>
</tr>
<tr>
<td>• Require to write from sources</td>
<td>• Existing and future needs for English</td>
<td>participate in the project</td>
</tr>
<tr>
<td>• Fit with current study</td>
<td>• Existing reading and writing context</td>
<td>- Reasons for signing up</td>
</tr>
<tr>
<td>• English is important</td>
<td>• Language proficiency</td>
<td>(beyond the scope of this study/not included in final analysis)</td>
</tr>
<tr>
<td>• Immediate need</td>
<td>• Childhood &amp; family-based literacy</td>
<td>2. Participants as</td>
</tr>
<tr>
<td>• Low proficiency</td>
<td>• View on education/roles of teachers &amp; learners</td>
<td>readers and writers of English</td>
</tr>
<tr>
<td>• Time constraint</td>
<td>• Preferred learning environment</td>
<td>3. Contradictions</td>
</tr>
<tr>
<td>• Five paragraph format</td>
<td>• Perceptions and attitudes toward learning English</td>
<td>- Primary</td>
</tr>
<tr>
<td>• Knowledge of self as a learner</td>
<td>• Existing reading and writing context</td>
<td>- Secondary</td>
</tr>
<tr>
<td>• Knowledge-telling</td>
<td>• Perceptions and attitudes toward academic reading &amp; writing</td>
<td>- Tertiary</td>
</tr>
<tr>
<td>• No synthesis experience</td>
<td>• Reading &amp; Writing behaviour</td>
<td>- Quaternary</td>
</tr>
<tr>
<td>• No formal instruction on strategy</td>
<td>• Reading &amp; writing difficulties/problems</td>
<td>(beyond the scope of this thesis/not included in final analysis)</td>
</tr>
<tr>
<td>• No explicit discussion on goal-setting</td>
<td>• Strategy use</td>
<td>4. Perceived</td>
</tr>
<tr>
<td>• Teacher-set goals</td>
<td>• Self-regulation</td>
<td>development</td>
</tr>
<tr>
<td>• Not enough writing, no in-class writing</td>
<td>• Out of class engagement</td>
<td>- Explanation and</td>
</tr>
<tr>
<td>• No teacher-learner writing conference</td>
<td>• Managing own learning</td>
<td>description of conceptual understanding of learning concepts</td>
</tr>
<tr>
<td>• No support from family</td>
<td>• Challenges</td>
<td>- New application</td>
</tr>
<tr>
<td>• Maintaining study-social balance</td>
<td>• Tensions</td>
<td></td>
</tr>
<tr>
<td>• Noisy in class/Large class/ keep quiet</td>
<td>• Large class</td>
<td></td>
</tr>
<tr>
<td>• Group work</td>
<td>• Needs not met</td>
<td></td>
</tr>
<tr>
<td>• Overseas experience</td>
<td>• Future needs</td>
<td></td>
</tr>
<tr>
<td>• Get good grades</td>
<td>• Keep quiet in class</td>
<td></td>
</tr>
<tr>
<td>• Peer support</td>
<td>• Pre-intervention behaviour</td>
<td></td>
</tr>
<tr>
<td>• New concepts</td>
<td>• Reported application of new concepts &amp; strategies outside the intervention</td>
<td></td>
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<tr>
<td>• New understanding</td>
<td>• Observed application of new concepts &amp; strategies during intervention task performance</td>
<td></td>
</tr>
<tr>
<td>• Home reading culture</td>
<td>• Ability to articulate conceptual understanding/explain application/justify and describe usefulness &amp; benefit</td>
<td></td>
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<tr>
<td>• Like small class</td>
<td>• Additional resources</td>
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<td>• Reading for pleasure</td>
<td>• Positive learning experience</td>
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<td>• Support from husband</td>
<td>• Encouragement from supervisor</td>
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<td>• New concepts</td>
<td>• PhD is important</td>
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<td>• PhD is important</td>
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APPENDIX R
SAMPLE OF AUM’S INTERVIEW PROTOCOL

Aum’s Interview

R: Good afternoon
A: Good afternoon
R: How are you?
A: I’m fine, thank you.
R: Thank you for coming today. Thank you for agreeing to talk to me. As you
know, the purpose of this interview is for you to tell me about your feelings,
your attitudes and your learning habits. This information will help me
understand how you learn English with regard to ahh reading and writing skills
and how you have carried out your reading and writing tasks during this
project. This interview will also give me a chance to check with you some of
the statements you have written in your self-reflection form. This is to make
sure that I understand what you would like to tell me in the way you intend it
to mean. OK? So your meaning and my meaning will be the same so we
understand each other.

R: Before we begin, I’d like to tell you that there are 30 questions on my list.
There is no time limit for this interview. You are welcome to talk as much as
you would like about what you feel important to you and relevant to the
questions. If any of the questions is unclear to you and you would like
clarification or further explanation or examples, please let me know. Likewise,
I may ask you to add more detail to your answers at times. OK?

R: As we have agreed, this interview is being recorded and you will remain
anonymous. The only two people that might have a look at this interview I
myself I will definitely look at this interview but my supervisor might look at it
as well. Is that OK?
A: Yeah yeah OK
R: Umm If you would like a short break, do not hesitate to tell me, or if you
want a break, I will stop recording. And then we have a short break and then
we’ll come back again to the interview and we will record again. We will
return to the interview and recording when you are ready. OK?
A: Yes
R: Are you ready now?
A: Yes
R: OK. Right number one, what are your study goals for this year and this
semester?
A: You mean for my ahh for degree study?
R: Yes you’re doing your PhD, right?
A: Yeah DBA
R: DBA
A: Actually it’s a difference between PhD and DBA
R: But it is a doctorate degree
A: Ahh yes
R: What is DBA?
A: Doctoral in Business Administration
R: Doctoral in Business
A: But for DBA course we take some course to learn and to do some thesis to
do thesis
R: Ummhm so thesis
A: But for PhD focus on thesis
R: OK that's what I'm doing, purely thesis
A: Yes
R: So no course work. OK, and you do some course work as well
A: Yes
R: OK, so what are your goals for this year for this ahh doctoral study?
A: Actually for actually ahh the final goal should be I I get the doctoral degree
R: OK
A: But for this year umm I aim to finish my course work R: OK
A: And then for next year I need to ahh finish the consultation because they
ask for consultation for semester //achievement goal, product-driven//
R: What do you mean consultation?
A: Consultation
R: Who do you consult?
A: Students will find company
R: OK
A: And umm you need to ask permission that company that you need to find
out the problem of the company and then you need to write the assignment or
maybe just like proposal
R: OK the proposal
A: Problem-solving
R: OK, so you act as a consultant to solve the problem and you need
permission to to investigate if they have any problem or not
A: Yes
R: And if there is a problem you will recommend how to solve the problem
A: Yeah and the the committee
R: As part of your DBA
A: Just only for the consultation
R: Next year
A: Next year
R: OK so this year you finish you course work?
A: This semester
R: This semester you finish the course work, oh, OK, right, OK number two,
why did you volunteer to participate in this research?
A: Actually after finish umm the the course work
R: Yes
A: I need to write maybe a proposal //immediate need//
R: You need to write a proposal
A: Proposal
R: OK
A: And this proposal need to write in academic writing
R: Academic writing, OK
A: I know that that is my weak point //low opinion of own writing ability –
lack self confidence in academic writing//
R: OK, yes
A: Yes I need to find some opportunity or find ahh a course to improve my
writing //look for opportunity to practice//
R: Ahh OK OK
A: So I think this is the good chance for for me //meets her need//
R: A good chance for you
A: Yeah because ahh when we when we learn of study the English course in Thailand we don’t know that what is the degree of the teacher but sometimes they only
R: The degree of the teacher, you mean the qualification?
A: Yes because sometimes it’s just the foreign I mean like foreign foreigner
R: Foreigner
A: Right the one that speak the mother language
R: OK native speaker
A: Yeah so sometime they may not know about how to have just like how to communicate or (native speakers may not be good teachers)
R: How to teach
A: How to teach
R: The psychology of the teaching profession
A: Yeah so I heard from my friend that you you have some experience
R: Alright
A: About teaching the foreign students
R: OK
A: I think this is the good chance for me to
R: OK, so my qualification was one of the factors that you joined this
A: Yes definitely //values qualification and teaching experience//
R: Oh OK if I If I ahh had been only a PhD candidate and no teaching experience outside Thailand, would you have joined?
A: Actually depends on your topic also //topic meets her needs//
R: Oh depends on the topic also
A: Yeah
R: But now the topic you said is about academic writing
A: Yes
R: And also ahh my experience and qualification teaching overseas so you so these two combined so you joined this
A: Right
R: OK (both chuckled) OK number three, are you satisfied with the way it has turned with the way the project has turned out for you?
A: You mean how to how you teach?
R: Are you happy with the project?
A: Yes sure because I am learning benefits from from this //positive feedback//
R: From form this course
A: Yes this course just like umm first time before taking this course
R: Umm
A: So just when I’m reading I’m just read and
R: You just read
A: Just read and try to understand every sentence //previous reading behavior//
R: Alright
A: But sometimes ahh really difficult for just like what Thai people like me with reading ahh
R: Umm
A: Do you think ahh we cannot understand all all the word in the text //previous reading behaviour)
R: Do you have to understand every word in the text?
A: Before
R: Oh that was what you thought before
A: Yes
R: OK
A: And sometime I’m lost my way because I don’t stick on the main idea
E: Alright
A: But after taking the course ahh your strategies
R: OK
A: Advise me for how to read
R: OK for example what strategy?
A: For example like self-questioning I never know that before, you know.
//self-questioning - new concept/
R: Alright yes OK
A: Even I studied in America //previous learning experience//
R: Yes you have a Master’s degree
A: Yeah but before ahh I I not really before, after
R: OK
A: I didn’t know that ahh when we read we need to ask ourselves that umm do
we still understand what the text try to speak out //previous reading behaviour,
no comprehension monitoring//
R: Umhm yeah to monitor your comprehension
A: Yes yeah like that. I just read and guess just only what is it about //previous
reading behavior//
E: Alright try to guess from the text
A: Yeah and sometime I stuck with the vocabulary that I didn’t know I just to
open open the dictionary (reading strategies = guessing and using a dictionary.)
R: Right
A: But you know sometimes you not go through this because ahh when you
concentrate with the text and after that we find something stuck and then go to
the dictionary and then we lost our concentration //distracted when facing
unknown words and stop to use a dictionary.//
R: Right right right
A: And after got into what I have read
R: OK where was I?
A: Yes just like that
R: OK
A: But after the strategies just like self-questioning and also the self-
instruction, I just read and then OK what is the main idea of this text first and
then just focus on the main idea of the paragraph even though in the paragraph
I have the vocabulary vocabulary that I didn’t know and so if I am still
understand what the paragraph like to say just skip that //new strategy, used
monitoring strategy, ignore unknown words//
R: You understand the gist the key concept and that’s alright. You don’t need
to understand every word anymore
A: Yes but if the sentences is umm just like main idea important I just
sometime guess just like guess from the connecting sentence or maybe the
whole paragraph to figure that to guess what is that vocab means //now read
for main idea and overall understanding, no longer relied on every word//
R: OK you mention a lot about reading. What about writing? This is reading-
to-write and we focus on both reading and writing. Can you tell me more, a bit
about writing? How does this course help you?
A: OK umm for the writing when I just like the recorder sentence order
//knowledge telling/
R: What’s that?
A: The instruction, not instruction, look like ahh you need to write the opinion
about the question or
R: Instruction OK OK
A: When I read instruction I just imagine what is the details that I need to write
because I focus on the quantity //compensatory strategy to cope with a writing
task//
R: The quantity
A: The quantity of how long
R: How long
A: Yes like that
R: OK
A: Because I don’t know for other people for my age I think for me I think I
think that umm if we can write very long so maybe we can get more score
//compensatory strategy//
R: Ohh OK you mean the grade
A: Yes the grade
R: Longer text
A: Yes just like when we are trying to say everything that we think so people
will understand more
R: OK
A: Yes
R: Alright
A: But not concentrate on the quality //recognising own weakness//
R: On the quality OK, so what’s the difference now?
A: Ahh the difference now is ahh before I’m writing as we learn for the one
that have introduction and
R: Oh how to process writing
A: Toulmin //new strategy//
R: Oh Toulmin
A: Toulmin
R: Yes
A: Not SCoba, SCoba and Toulmin
R: Coherence SCoba and Toulmin and we did some process writing ahh
introduction body and
A: Yes and conclusion actually ahh using the Toulmin to guide my writing and
then use the SCoba for checking //new strategy//
R: OK yes yes
A: And for Toulmin ahh umm after notice that strategy I I before writing I I
have some like brainstorming //development and writing process//
R: OK
A: Or mind map for my writing //new strategy//
R: OK
A: Yeah and I know that what I should write for for the just like introduction
or main idea and some supporting //new understanding of writing process//
R: OK
A: Yeah and then for the ahh some ahh the difference idea
R: Umm how to reason
APPENDIX S
ESSAY ARGUMENT STRUCTURE CODING GUIDELINES

Dear Dr. Songyut Akkakoson,

As coding based on the Toulmin’s argument model may not be straightforward, may I request you code each essay twice, leaving approximately 1-2 weeks between the first and second coding?

There is no definite agreement as to how the coding should be done. Some scholars code every sentence; others code a few sentences as a single thought unit. For my research, please adhere to the following coding criteria.

1. Code each sentence as a separate unit.
2. Code dependent and independent clauses in compound or complex sentences as separate units if you feel they represent different elements of the Toulmin’s model.
3. Code an assertion with “I think,” “I believe,” “I agree,” “I disagree” or similar indicative phrases as a claim.
4. Code an assertion with imperative indicators such as “must,” “should,” “have to,” or similar modals as a claim. (Although in some cases a sentence with “should” can also be coded as a reason/ground.)
5. If the claims (from number 4 above) do not have any grounds or warrants anywhere else in the essay, code them as claim [opinion]. The justification is that although these claims are not supported by any reason anywhere in the essay, the writer has included them as their claims. By coding them as such, it is likely that the real characteristic of the argument pattern will be recorded, albeit unsupported argument. Despite the fact that the above claims [opinions] do not have any supporting evidence, if these claims were to be ignored during coding, we may end up with a distorted picture of the overall argument.
6. A segment/sentence/clause signifying an assertion is a claim unless it serves as a ground (reason) or a warrant for other claim(s).
7. A warrant is more general than a ground because warrants are commonly accepted values and may be drawn upon to support grounds in different situations.
8. A ground (reason/data) is more specific than a warrant because grounds are normally adhered to specific claims and are not usually applied sweepingly across multiple arguments.

9. If claims, grounds, warrants, backing, qualifier, and rebuttals are not explicitly stated, please interpret and infer from the writing.

The coding is based on the Toulmin Argument Model (1958) and each sentence is to be coded for one of the 6 elements, namely, (1) **Claim** (assertion, stance, thesis, position), (2) **Data/Ground** (reason, evidence, statistic, data to support or prove that the claim is valid), (3) **Warrant** (statement linking data to claim, accepted value or virtue shared by writer and audience), (4) **Backing** (statement supporting warrants), (5) **Rebuttal** (statement addressing opposing view or possible objections to Claim), and (6) **Qualifier** (limitations in terms of frequency - always, usually, normally, often, rarely, occasionally, never, seldom).

See the example from Toulmin (1958) below.

Harry was born in Bermuda (D)}                   So {Harry is a British subject (C)
Since 
A man born in Bermuda will be a British subject (W).

Harry was born in Bermuda (Data) and, therefore, Harry is a British subject (Claim). A man born in Bermuda will be a British subject. (Warrant)

or

Harry is a British subject (Claim), (How do you know this?) because he was born in Bermuda (Data/Ground) (and this is true because…) anyone born in Bermuda is British (Warrant linking data and claim).

In coding the essays, there is no right or wrong answer - you just code each sentence according to its function in an essay as you see fit or 'feel right'. There can be multiple claims, data, warrants, backings, rebuttals, and qualifiers, or some of these elements may be absent in the writing because the writer has not included them.

Also, a single sentence could be coded as several elements. For instance, a sentence can be a claim or data. In this case, you assign the code best suited and provide 2-3 sentences as an explanation as to why you think it is a claim and not data.

Thank you

Gaye Wall