Engaging young writers in self-regulated learning: an examination of teaching practices and learning processes

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Abstract

One approach currently promoted to support substantial increases in student learning is the development of self-regulated learning SRL (Hadwin & Oshige, 2011; Winnie, 2014a; Zimmerman & Schunk, 2011). However there is limited research into SRL as an event that happens in real time, particularly examining how co-regulated learning leads to SRL or how young writers acquire SRL skills (Perry & Rahim, 2011).

This study investigates how Year 1 writers can be supported to SRL. This study employed a case study methodology and focused on three teachers and nine students during writing lessons over thirty-five weeks. Microanalytic observations involved a brief questioning prior to, during and after writing, and occurred on four occasions throughout the study period to examine how students set goals, planned strategies, used strategies, and self-evaluated what they had achieved (Cleary, Callan, & Zimmerman, 2012; DiBenedetto & Zimmerman, 2013; Hadwin & Oshige, 2011; Zimmerman, 2008). Following the observations, an interview was conducted with each teacher. These interviews operated as directed conversations that enabled an in-depth exploration of particular issues arising from the observations and the analysis of data. Directly following observations, writing samples from the students were collected (nine samples per term, thirty-six in total). A Year 1 writing analysis tool developed by Mackenzie, Scull, and Bowles (2015) was used to analyse these samples. Constructivist grounded theory method was used to structure the collection and analysis of interview, observation and work sample data (Bryant & Charmaz, 2007; Charmaz, 2000, 2014).

The analysis of findings revealed that the teacher participants used specific processes and practices to support their students to engage in SRL. It is proposed that the supporting practices observed could be suitably defined as three core learning processes that supported Year 1 writers to engage in SRL. The core processes identified were:

- An intentional learning process
- Socially structured regulation of learning
• Metacognitive regulation of learning

These three processes were theoretically positioned to explore how they impacted on students’ engagement in SRL. The overall conclusion was that each process operated differently with specific functions.

The findings illustrated that teachers implemented an intentional learning process to focus and clarify student understanding and to guide students to engage in self-assessment and use of their own feedback loop. This process functioned to support intentional learning by providing opportunities for purposeful learning, conceptually focused learning, self-assessment and connection making. There was also evidence of socially structured regulation of learning implemented by teachers to systemise the students’ learning, to engage them in peer-supported learning and to scaffold learning. This process functioned to provide opportunities for challenging but manageable learning, co-regulated learning and scaffolded learning. Metacognitive regulation of learning identified as the third process, was used to prompt students to use metalanguage strategies such as goal setting, strategy planning/use and reflecting upon learning.

To begin the construction of a substantive theory, a synthesis and conceptualisation of the above findings was conducted. It was proposed that the three core learning processes identified during the study could be interrelated to support Year 1 writers to engage in SRL, and when suitably aligned, could function to provide a transparent learning process resulting in a synergy of learning. To conclude findings, a guiding principle for designing instruction was presented. This serves to illustrate how key learning processes can be aligned to support Year 1 writers to SRL.
Declaration

This is to certify that:

(i) the thesis comprises only my original work towards the PhD except where indicated in the Preface

(ii) due acknowledgement has been made in the text to all other material used

(iii) the thesis is fewer than 100,000 words in length, exclusive of tables, maps, bibliographies and appendices

Elisabeth Clifton
Acknowledgements

This thesis is dedicated to my mother, for her unwavering love and support. I cherish her for her encouragement and continued interest in my teaching, studies and research.

My deepest gratitude also extends to my amazing supervisors Associate Professor Janet Scull and Dr Shiralee Poed. I am greatly indebted to them both for continuing this journey with me despite their career paths changing direction very early into this endeavour. I am doubtful this undertaking would have reached a conclusion or at the very least been as enjoyable if both had not been available to provide me with such exceptional guidance. I am particularly grateful for how Janet and Shiralee enabled me to feel I could always achieve success by simply making an attempt. Their kindness, extensive knowledge and rigorous approach to providing constructive feedback, encouraged me to continuously extend myself.

Finally, and not least, this work would not have been possible without the cooperation extended to me from this study’s participants. I am grateful for them welcoming me into their learning spaces; the time and invaluable insights generously given to me by the teachers, and the wonderful pieces of student writing, entrusted to me.
Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>CGTM</td>
<td>Constructivist Grounded Theory Method</td>
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<tr>
<td>FA</td>
<td>Formative Assessment</td>
</tr>
<tr>
<td>GTM</td>
<td>Grounded Theory Method</td>
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<tr>
<td>LI</td>
<td>Learning Intention</td>
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<td>SC</td>
<td>Success Criteria</td>
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<td>SRL</td>
<td>Self-regulated Learning</td>
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<td>SRSD</td>
<td>Self-regulated Strategy Development</td>
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<td>ZPD</td>
<td>Zone of Proximal Development</td>
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Chapter 1: Introduction

Background and Context

Contemporary learning expects students of all ages to activate and sustain their own learning (Fadel, Bialik, & Trilling, 2015). This requirement calls for a fresh approach to how students are supported to learn. Not surprisingly, current literature calls for an investigation into new learning partnerships and the pedagogies needed to support deep learning in contemporary school settings (Fullan & Langworthy, 2014). This call for renewed approaches includes the need to investigate practices of assessment feedback that can assist students to build their capacity to become reflective, adaptive and independent learners (Black, 2015). For some time there has been a shift in many educational systems towards learner-centred pedagogies with the aim that learners develop the capacity to monitor their own progress towards specified goals and to become directors of their own learning (Poehner, 2012). Supporting students to become masters of their own learning through the development of self-regulated learning (SRL) logically suggests substantial increases in learning outcomes (Hattie, 2012; Spruce & Bol, 2015; Wiliam, 2011).

There is much research supporting the claim that successful learners consider, reflect upon and modify their thinking processes (Molenaar & Chiu, 2014). It is believed that successful learners not only know how to use effective learning strategies but also possess the will to learn (Jarvela, Jarvenoja, Malmberg, Isohatala, & Sobocinski, 2016). Learners such as these are commonly recognised to be capable of engaging in SRL by becoming behaviourally, intellectually and emotionally involved in their learning (Jarvela, Jarvenoja, et al., 2016). To better understand and describe how teachers support students to engage in SRL is the central focus of this study.

Incorporating the Australian Curriculum and reflecting state government priorities, the Victorian Curriculum F-10 was released during 2015. This new curriculum includes details of the capabilities all students are expected to acquire; the two most relevant to the notion of SRL are the Critical and Creative Thinking Capability and the Personal and Social Capability. Prior to 2015, the Australian Curriculum listed these capabilities as general capabilities that were promoted as enablers for other learning areas but in this new curriculum, teachers are expected to both teach and assess these capabilities as areas of teaching and learning (see Appendix A).
In line with government priorities, Catholic Education Melbourne promotes initiatives such as the pre-planning of intended learning combined with powerful feedback to students (Catholic Education Office, 2009), both of which link well with SRL. Research into SRL identifies a strong association between the quality of goal setting that students employ along with strategic planning and subsequent performance phase processes such as strategy use (Zimmerman & Labuhn, 2012). Research also indicates strategy development depends more on increasing familiarity via practice, experiences and schooling rather than chronological age (Alexander, Graham, & Harris, 1998; Kron-Sperl, Schneider, & Hasselhorn, 2008; Lau, Kitsantas, & Miller, 2015). Although still in its infancy, co-regulated learning research views the notion of SRL as distributed regulatory expertise as insightful (Hadwin, Jarvela, & Miller, 2011).

Problem Statement

A preliminary review of the literature reveals that to-date there is limited research into SRL as an event that happens in real time in authentic classroom settings, particularly research that examines how co-regulated learning leads to SRL or how young writers acquire SRL skills (Lau et al., 2015; Perry & Rahim, 2011). Previous research has investigated how SRL phases relate to collaborative engagement between student teachers (Jarvela, Jarvenoja, et al., 2016); how high, average and low achieving primary students engage in math (Lau et al., 2015) and what teachers generally know about SRL (Spruce & Bol, 2015). Research into SRL has also investigated how different instructional or social contexts influence students’ capacity to SRL (Perry, VandeKamp, Mercer, & Nordby, 2002).

Following consideration of this existing research, the need for further investigation into the interplay between social contexts and the regulation of learning was identified, particularly with respect to young learners of literacy. The underlying individual and social processes that support young learners to engage in SRL are complex, so it was determined that to understand what processes can explain how young writers can be supported to engage in SRL was warranted. In addition, for this understanding to be suitably achieved, a close study of teachers and students in an authentic classroom setting was required. Learning to write is essentially a social process so the setup of a learning space can influence what is learnt and how it is learnt (Fisher, 2010). The co-regulatory nature of this learning process involves a shift of control from
teacher to student in response to temporary mediation of learning (DiDonato, 2013; Perry & Rahim, 2011).

**Statement of Purpose, Rationale and Significance**

The purpose of this research was to investigate how teachers supported Year 1 writers to engage in SRL (i.e. to activate and sustain their own learning). Acknowledging that change requires observing patterns of behaviour so a conscious decision can be made as to how to alter these patterns (Davidson, 2013), the aim was to provide insight into how young students can be supported to engage in self-regulated learning. An instrumental case study design was implemented to study the social phenomenon under investigation and constructivist grounded theory method was selected to structure the collection, analysis and organisation of data (Bryant & Charmaz, 2007; Charmaz, 2000, 2014). Participants included three teachers and nine Year 1 students (in the state of Victoria, Year 1 is the second year of formal schooling).

The findings from this research are significant as they extend the body of knowledge surrounding how young writers can be supported to engage in SRL and provide pedagogical insights into what learning processes can be implemented to support students to engage in SRL. This includes what function these supporting processes serve to provide and the nature of the impact that each process contributes to supporting the students to engage in SRL.

**Research Questions**

The primary research question for this investigation was *How were Year 1 writers supported to engage in SRL?* The subsidiary research questions included:

1. What practices and processes did teachers use to support Year 1 writers to engage in SRL?
2. Why did teachers use these practices and processes to support Year 1 writers to engage in SRL?
3. What strategies did Year 1 writers use to self-regulate their learning?
4. How did teachers change practices to support students with varied capacities to engage in SRL?
5. How did students with varied capacities to engage in SRL, respond differently to supporting practices?

Research Approach

This investigation was conducted in an authentic learning environment, with a specific focus on how students were supported to activate and sustain their own learning. The aim was to examine pedagogical practices that contribute to existing knowledge about how students could be supported to engage in SRL. The interpretive tradition chosen for this qualitative inquiry aligned with the theoretical perspectives associated with constructivism. An instrumental case study design was chosen to investigate the social phenomenon under investigation and constructivist grounded theory method (CGTM) was selected to structure the collection and analysis of data (Bryant & Charmaz, 2007; Charmaz, 2000, 2014).

To review literature early in the research process is a controversial issue with respect to those who use grounded theory method (GTM). Supporters of classic GTM recommend researchers avoid taking a pre-framed professional interest perspective because entering the field with preconceived questions and categories, risks the emergence of and grounding of being derailed (Christiansen, 2011; Simmons, 2011). In contrast to this view, a common criticism of GTM is its limitations on a priori knowledge (Jones & Alony, 2011). Sympathetic to this view is Dey (1999), who criticised Glaser and Strauss (1967) by stating “There is a difference between an open mind and an empty head” (p. 251). The research process behind this study followed Charmaz’s (2014) recommended approach where the researcher takes a critical stance toward earlier theories so prior to entering the field, a literature review identified potentially related issues and topics. Accessing the literature to provide further voice to the theoretical reconstruction was thought necessary (Bryant & Charmaz, 2007; Charmaz, 2014), to not only contribute to the research process but also to most importantly, avoid reinventing the wheel. A stance of disconfirmation to help prevent bias by preconceptions formed during the review of literature, were upheld throughout the remainder of the study (Bryant & Charmaz, 2007).

Structure of the Research

In the proceeding chapters, the discussion of this research will be structured as follows. In chapter 1, the background and context to the research will be provided; then the problem...
underlying the study and the purpose of the research will be stated (including the rationale and significance of the research). The primary research question and subsidiary research questions will be listed followed by a brief description of how this research was approached. The final sections of chapter 1 will provide the structure of the research; the researcher’s background and some definitions and key terminology.

In chapter 2, a review of the literature will be provided beginning with a theoretical positioning for the research. The key topics that were reviewed will then be discussed, these will include: self-regulated learning; classroom-based research into SRL; formative assessment; and information and research on how young students learn to write. Then in chapter 3, the methodology used for the research will be presented. The information provided will include a rationale for the methodology; an explanation of the sampling strategies employed; the participants’ backgrounds; contextual information (including a description of the school site and population); how the fieldwork was conducted; and how the findings were developed. Chapter 3 will conclude with a brief discussion of issues of trustworthiness.

The results from this investigation will then be presented across chapters 4, 5, 6 and 7. This discussion will be organised as follows. In chapters 4, 5 and 6, the discussion will focus on the three core categories and their corresponding sub-categories that were identified during this study and will include an explanation of how each core category represents a separate process identified to support students to engage in SRL. The discussion in chapter 4 will focus on the core category labelled *An intentional learning process*. The discussion in chapter 5 will focus on the core category labelled *Socially-structured regulation of learning*. The discussion in chapter 6 will focus on the core category labelled *Metacognitive regulation of learning*. In chapter 7, the discussion will present the sub-claims from this research, supported with reference to research and professional literature.

In an attempt to extend these findings towards a theoretical explanation for how the students were supported to engage in SRL, a synthesised perspective of the findings will be presented in chapter 8. Related theory and research will be included in this discussion. To conclude the discussion of this research, chapter 9 will include the presentation of the key findings and the conclusions in response to the research questions that underpinned this investigation. The limitations of this study will then be discussed followed by a discussion of the
professional practice and policy implications, possible as an outcome of this research.
Researcher reflections will conclude this final chapter.

**The Researcher**

After graduating as a teacher in 1987, I worked in primary and secondary Catholic schools within Victoria, Australia. Since 2005, I have also worked as an adviser to schools, providing assistance with the inclusion of students with additional learning needs. I have completed postgraduate studies in education, special education and psychology. Prior to beginning this research, my previous study, my work as an educational advisor and my teaching experience, had led me to believe that the best approach to supporting young students to become writers was to provide as much explicit teaching as possible, including one-on-one instruction and small group instruction. In addition, an expectation that young students can engage in SRL was likely to be possible for only a minority of students. Along with the realisation, that contemporary education required students of all ages to engage in SRL, my scepticism and curiosity to see what was possible, drove this investigation.

**Definitions and Key Terminology**

To provide focus, this study examined pedagogy related to SRL. The term *pedagogy* ‘is derived from the Greek paidag?ge? meaning literally, ‘to lead the child’ or ‘tend the child’. In common usage it is often used to describe practice with children’ (Smith, 2012). In this thesis, pedagogy refers to the science and/or art of education in an attempt to explore instructional theory. The term SRL is used throughout this thesis. At present, many SRL models exist, each emphasising different aspects of SRL. Although these models show overlap, they are fundamentally distinguished in terms of the learning theories in which SRL is defined. To address the interdependence of these differential aspects of SRL, the objectives of this study are situated in a broad frame across both the socio-cognitive and sociocultural perspectives of SRL. To address the social-cognitive influences on SRL, this study is positioned in Zimmerman’s (2000) *Phases of Self-regulation* model, which recognises that learners engage in SRL through a cyclical process. This study was theoretically positioned in Zimmerman’s model because it addresses both the socio-cognitive aspects and volitional aspects of self-regulation through a cyclical learning process, thus providing scope for a pedagogical examination of SRL. In addition,
to address the sociocultural influences on SRL, a combination of sociocultural explanations of learning are considered (Vygotsky, 1978; Tharp & Gallimore, 1988; Mercer & Littleton, 2007; Rogoff, 2008), as well as SRL research that adopts a sociocultural approach (Perry, Nordby & Vandekamp, 2003; Hadwin & Osighe, 2011; Jarvella, Malmberg & Koivuniemi, 2016). These explanations and approach to research, are based largely on the assumption that SRL is inherently a social process.

Researchers of SRL propose this to be the degree to which students are metacognitively, motivationally, and behaviourally active participants in their own learning process (Zimmerman & Labuhn, 2012; Zimmerman & Schunk, 2011). Throughout this thesis the term engage is consistently linked to this notion of SRL. Although there is lack of consensus surrounding the notion of engagement (Reschly, Christenson, & Wylie, 2012), to avoid confusion, all uses refer to how actively involved a student appears in the learning process and engagement is viewed as a broad multidimensional construct consisting of behavioural, academic, cognitive, and emotional or psychological domains (Reeve, 2012).

Chapter Summary

In summary, contemporary learning requires students of all ages and capacity to engage in SRL therefore an investigation into new pedagogies and presenting challenges was required. This chapter has outlined the background, rationale and proposed method for an investigation of how Year 1 writers can be supported to engage in SRL. Chapter 2 provides a review of the literature and the extant research behind the phenomena under investigation.
Chapter 2: A Review of Literature

The discussion in this chapter is sectioned according to the learning theories and research in which this study is positioned. The first section positions this investigation within sociocultural theory and then discusses various theories of learning and development that underpinned this investigation. These varied explanations for how young children learn are headed as follows:

- Learning leading development
- Learning as a social process
- Learning led by classroom dialogue
- Learning led by guided participation
- Learning led by psychological tools
- Mediation and scaffolding
- Engagement-led learning and motivation
- Transference

In the second section, a summary of background literature to Self-Regulated Learning (SRL) is provided, including related research, associated models and approaches to SRL adopted in this investigation. This information is organised under the following headings:

- Background information to SRL
- Self-regulated learning as a construct
- Metacognition
- Children’s capacity to self-regulate learning
- Co-regulated learning and SRL
- Phases and processes of SRL

Then, in the third section, classroom-based research in SRL is reviewed, which includes research from a microanalytic perspective of SRL as well as research conducted using a meta-analysis approach.

The fourth section discusses how formative assessment contributes to SRL. This includes the discussion of formative assessment techniques such as the sharing of Learning Intentions and Success Criteria with students and providing feedback to students that regulates their learning. Then the fifth section briefly outlines a variety of perspectives of how young
learners develop as writers. These explanations are organised under the following three subheadings and provide theoretical background for the discussion of findings presented in forthcoming chapters.

- Sociocultural perspectives of writing development
- Cognitive/motivational perspectives of writing development
- A semiotic/functional perspective of writing development.

This final section of the review then precedes to the discussion of instructional procedures that are recognised to support early writing development; and concludes with discussion of the aspects of writing that recent research recognises as central to early writing development.

**Theoretical Positioning**

This investigation was positioned within the paradigm of sociocultural theory. A focus of sociocultural research is to examine how co-construction of knowledge is internalised, appropriated, transmitted or transformed in either formal or informal learning settings (John-Steiner & Mahn, 1996; Rogoff, 2003; Schoen, 2011). The seeds for sociocultural philosophy were first sown when Vygotsky proposed that the best method to study human development is through reconstructing the social, environmental and cultural forms and situations to do with emergence of behaviour and consciousness, and its subsequent development (Schoen, 2011).

Rogoff (2008) claims a sociocultural analysis requires consideration of how individuals, groups, and communities transform as they collectively constitute and are constituted by sociocultural activity. Similarly, Mercer and Littleton (2007) stress that to apply a sociocultural theory of learning and development to the classroom requires consideration of the relationship of three levels of human activity:

1. the cultural/historical (collective development of knowledge)
2. the psychological (individual and cognitive development)
3. the social/interactional (interaction within and between individuals).

To comprehend how instruction in the classroom creates knowledge and supports the development of understanding, Mercer and Littleton (2007) propose that an explanation must give attention to not just what goes on at the social level (i.e. level 3) but also consider how forms of educational dialogue are structured by factors at level 1 and 2. This explanation should also
reveal how factors at level 1 and 3 impact on outcomes at level 2. To arrive at this explanation, the dynamics of classroom dialogue need to be reflected upon and recognised as having a unique role in the educational process.

**Learning leading development.** Vygotsky was interested in how learners progress. An important implication of his writings is the need to focus teaching and assessment of student learning, on the potential of the learner as opposed to their demonstrated level of ability (Daniels, 2011). This was most apparent when Vygotsky (1978) defined the Zone of Proximal Development (ZPD) as “the distance between the actual development level as determined by independent problem solving, and the level of potential development as determined through problem solving under guidance or in collaboration with more capable peers” (p. 28). From this perspective, it is within the dialectical process of being/becoming that a concurrent consideration of who a child is and who they are becoming, can reveal their developmental pathway (Holzman, 2009).

According to Vygotsky (1978), environments in which learning and development occur in a unified manner, advance development. This conceptualisation of the ZPD, although commonly viewed simply as expert-novice interaction, extends to the shifting control or responsibility that takes place within socially shared activities, within an individual’s developmental construction-zone (Bodrova & Leong, 2006; Cole, 1985; Newman, Griffin, & Cole, 1989). From this perspective, zone should be conceived not as a discrete point on a scale but rather as a continuum of functioning behaviours (Bodrova & Leong, 2006). Such understanding of the ZPD, draws attention to those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are presently in an embryonic state. These functions could be termed the ‘buds’ or ‘flowers’ of development rather than the ‘fruits’ of development. (Vygotsky, 1978, p. 86).

From this perspective, the ZPD can be viewed as a tool to assess the learner’s current state with glimpses of potential because performance proceeds competence.

When discussing performance before competence, Cazden (1981) aptly describes instruction within the ZPD as leading to development “by aiming at the ‘ripening’ function; by being just a little ahead, not out of sight” (p. 5). Importantly, Vygotsky stressed that the entire
ZPD be used to identify the child’s developmental level because it reveals two important considerations: emerging skills and the limits of the child’s development - at that exact moment (Bodrova, 2008). In other words, it is the observation of assisted performance that reveals the behaviours that are on the verge of emerging and because observation of independent performance alone only reveals what the child knows and can do now, those skills that are on the edge of emergence will not yet be apparent (Bodrova, 2008; Levykh, 2008). This focus on process, as an approach to assessment of learning has overtime become embedded in what is now recognised as approaches to dynamic assessment. An interesting view regarding “the general practice of dynamic assessment is [that it is] either explicitly or tacitly inspired by the work of Vygotsky” (Daniels, 2011, p. 683).

**Learning as a social process.** The forthcoming discussion will focus on how learning can be promoted by joint activity made available through the organisation of social processes. Vygotsky (1962) viewed verbal commentary guiding children’s actions as central to the notion of learning through a social process with verbal commentary being the catalyst for shifts in mental functioning. Furthermore, Vygotsky argued that the ability to talk and think precedes the cognitive shifts necessary for learning (Raban, 2001). One way that children develop speech is by imitating language used by others when directing their own activities and others’ activities, and then gradually internalising this language into thought (Karpov, 2014). Not surprisingly, the language used by children when self-regulating whilst learning can be directly linked with the language used by adults during previous directed teaching (Berk & Harris, 2003; Karpov, 2014; Lyons, 2003). Furthermore, a direct relationship exists between level of control and speech through which a transition occurs: from adult control, to shared control, to self-control and maturing to self-regulation (Gallimore, Dalton, & Tharp, 1986; Lyons, 2003). As young children mature they begin to use self-talk to monitor their performance and to comprehend a situation (including finding a solution for a challenging task) (Karpov, 2014). This self-directive speech is a key tool for self-regulatory control (Karpov, 2014; Zimmerman, 2002) and research shows that, overall, the development of private speech and its eventual fruition into internal thought, appear to be essential components of a developing capacity for SRL and problem solving (Karpov, 2014; Wigfield, Klauda, & Cabria, 2011).
Instruction should create possibilities for development, through active participation, based on collaborative and negotiated learning that involves transfer to the learner (Daniels, 2011; Hadwin & Oshige, 2011; Vygotsky, 1962). Similarly, Tharp and Gallimore (1988) believe “Teaching must be redefined as assisted performance” (p.21) as “Teaching consists in assisting performance through the ZPD” (p. 31). This perspective suggests that learning is dependent on the collective activity made available through organisation of social processes. Tharp and Gallimore’s (1988) neo-Vygotskian theoretical framework presents a theory of teaching as a four-stage description of the ZPD. The most distinctive aspect of their approach is the concept of performance in the ZPD as a circular, recursive process (Bodrova & Leong, 2006). They stress that the transition from assisted performance to unassisted, is neither abrupt nor linear. Stages include:

1. *Performance is assisted by more capable others*
2. *Performance is assisted by self*
3. *Performance is developed, automatized, and fossilised*

In summary, Tharp and Gallimore (1988) propose that development proceeds “Through guided reinvention…from the socially regulated to the self-regulated” (p.29-30) and that self-directive speech is the key to development through stage two and towards self-regulatory control (Tharp & Gallimore, 1988). Research shows that development of private speech and the shift to internal thought appear to be essential components of a developing capacity for SRL and problem solving (Wigfield et al., 2011; Zimmerman, 2002).

**Intermental developmental zones.** According to Mercer and Littleton (2007), social processes, when considered at the level of talk and dialogue, can form a bridge between cultural and psychological levels of human activity. The term *dialogue* refers to classroom talk that takes place in the course of educational activities. Research by Mercer and Littleton (2007) highlights how classroom dialogue contributes to children’s intellectual development and educational attainment, and identifies the distinctive role of spoken language in learning and development. They claim there is extant evidence supporting the view that children “are both active
constructors of their own understanding and also dependent on dialogues with others to scaffold their development” (p. 18).

It is interesting to note Mercer and Littleton’s (2007) beliefs about how the ZPD is commonly perceived. They consider that although the ZPD suggests the involvement of dialogue, it is commonly construed as “an essentially static concept, representing the mental state of the individual learner at any one time, rather than the dynamics of development through dialogue” (p. 21). Mercer and Littleton (2007) propose an alternative concept – the Intermental Developmental Zone. According to this model, the dialogue that occurs between individuals when jointly solving a problem provides scaffolding which creates the Intermental Developmental Zone for both participants’ learning, and so are able to operate just beyond their independent capabilities (Mercer, 2000). The Intermental Developmental Zone is considered to be helpful to conceptualise how a teacher and student can synchronise their knowledge and understanding throughout an educational activity. Findings from research by Schmitz and Winskel (2008) investigating collaborative learning, concluded that Mercer’s Intermental Developmental Zone, which is reliant on constructive challenging discourse, can potentially provide a platform upon which all learners can benefit from collaborative learning experiences. It is important to note that the Intermental Developmental Zone is viewed as a continuing state not just dedicated to the activity at hand but the overall intention of learning. Originally, Mercer and Littleton (2007) proposed Intermental Developmental Zone to support a process of ‘interthinking’ between teacher and student so knowledge and understandings are co-constructed in a way that “is more dynamic, more interactive and more clearly related to the task-related dialogic contributions of both teacher and learner” (p. 22).

Development supported by guided participation. The analysis of development is best approached through observation of people participating in sociocultural activity, as participation is itself the process of appropriation (Rogoff, 2008). The term guided participation was introduced by the Barbara Rogoff to clarify the nature of children’s cognitive development within the framework of sociocultural theory (Rogoff, Malkin, & Gilbride, 1984). Rogoff’s (2008) concept of guided participation is not an operational definition as such but rather meant to focus attention on the system of interpersonal engagements and arrangements aligned with social-based developmental processes. Guided participation along with ‘participatory appropriation’ and
‘apprenticeship’, form three planes of developmental processes that Rogoff (2008) proposes, correspond with three planes of analysis (personal, interpersonal and community processes). According to Rogoff (2008), development occurs as participation shifts from being relative peripheral to more managing the activity. Rogoff deliberately uses the term ‘activity’ (as opposed to behaviour) to describe action in search for method and meaning, and similarly Cole (1985) states “activities are systems in the system of social relations” (p. 159).

The concept of guided participation modifies the ZPD to include developmental goals and means of communication of cultures other than those stressing academic forms of discourse. Guided participation is most evident in interactions involving an adult or other skilled individual with an individual child or a small group of children (Rogoff, Mistry, Goncu, & Mosier, 1993). The benefits of guided participation are thought to lay with how it enables the learner to operate within their zone of proximal development through support provided by their interactions with those around them. Participation in guided participation emphasises tacit forms of communication, inclusive of both verbal and non-verbal exchanges (Mejia-Arauz, Roberts, & Rogoff, 2012). It involves the regulation of children’s activities and materials with the challenge and support of social partners, including adults and peers of varying levels of skills and status (Rogoff et al., 1993). A number of studies confirm that guided participation is beneficial to children’s development (Radziszewska & Rogoff, 1991; Rogoff, 1990; Rogoff et al., 1993). Most studies into guided participation have taken place in informal settings with strong emphasis on the active role of children observing and participating in organised activity with those around them (Bodrova & Leong, 2006; Rogoff et al., 1993).

**Psychological tools supporting learning.** As discussed, through conceptualisations of the ZPD, Vygotsky identifies the importance of social functioning in the structuring of individual psychological functioning. In this conceptualisation, cultural tools, signs and use of language as a symbol are used to mediate this process of learning in an instrumental fashion and often the assistant becomes the mediator (Levykh, 2008). Within the ZPD, cognitive development is realised and happens through a dialectical relationship between the individual and the social context in which the child develops (O'Donnell, 2012). Vygotsky (1978) proposed verbal commentary guiding children’s actions as the essential catalyst for these shifts in mental functioning, during which **intercognitive operations shift to the intracognitive.** In this process of
development, higher mental functions go through a sequence of stages along a continuum from social to individual (Bodrova, Leong, & Akhutina, 2011). The term ‘intermental’ denotes the first stage, which exists between two individuals; next, the ‘extra-mental’ stage involves self-talk leading to execution of self-communication and during the final ‘intra-mental’ stage, voluntary action takes place and new mental functioning has formed (Bodrova et al., 2011).

Vygotsky’s writings about psychological tools centre on how they influence cognition and affect, and by referring to them as “helping means”, emphasis was given to their function, within a process (Holland & Valsiner, 1988). Thus Vygotsky viewed mental or psychological tools as artefacts for ‘mediating’ (i.e. mastering mental processes) and, importantly, conceived them being of social origin versus individual origin (Daniels, 2011; Holland & Valsiner, 1988). Vygotsky and those adopting his notion of psychological tools as mediators of mental processes have been known to draw on an analogy between human practical activity and mental processes (Karpov, 2014). Just as practical activity is supported by tools of labour to power the performance (using spades and hammers), mental activity can be powered by psychological tools including language; counting; mnemonic techniques; algebraic symbol systems; works of art; writing; schemes, diagrams, maps and mechanical drawings. Vygotsky (1981) believed that humans master themselves through external symbolic, cultural systems as opposed to being subjugated by them and proposed that tools directed their mind and behaviour by being technical and altering; just as tools do in the physical world (Daniels, 2011; Holland & Valsiner, 1988). Just as human babies are not born with physical tools in hand, they are not born with ready-made psychological tools; instead they must acquire them (Karpov, 2014).

**Mediation and scaffolding.** Mediation as a concept, has vastly developed since Vygotsky’s original notion of psychological tools (Daniels, 2011) and, as a concept, is integral to his developmental theory of learning (Holland & Valsiner, 1988). Vygotsky viewed the concept of ‘mediation’ as being central to learning because it enables the higher processes (e.g. thinking and voluntary attention and memorisation) to develop on the foundation of the lower processes (e.g. photographic memory, involuntary memorisation) (Dixon-Krauss, 1996). Typically, mediating devices are created by allocating meaning to an object or behaviour; they operate in relation to a task and are used for self-control of cognition and affect, and are constantly being constructed and reconstructed as part of a collective and historical meaning system so most are not original.
(Holland & Valsiner, 1988). In education, “mediators can be useful in assisting children within their ZPD in the areas of perception, attention, memory, thinking, and self-regulation” (Bodrova and Leong, 2006, p. 73). Although Vygotsky did not use the term scaffolding, this notion is thought by some to be an inherent part of his theory of learning (Hammond & Gibbons, 2005). The notion of scaffolding is identified as the means within Vygotsky’s explanation that learning is collaboratively and internationally driven (Hammond & Gibbons, 2005).

Mercer and Littleton (2007) recognise concepts such as the ZPD and scaffolding as “neat metaphors” for the “active and sensitive” role of a teacher in student learning nevertheless, and cautions that the term ‘scaffolding’ be applied appropriately:

The essence of the concept of scaffolding as used by Bruner and colleagues is the sensitive, supportive intervention of a more expert other in the progress of a learner who is actively involved in some specific task, but who is not quite able to manage the task alone. Any other kinds of support are better described as ‘help’ (p. 18).

Scaffolding changes the learning process, but not the goal of the set task. What the learner is required to do is initially made easier with dialectical and tool-based support and gradually as the level of mediated assistance is reduced (i.e. faded), responsibility for performance shifts to the learner (Bodrova & Leong, 2006; Wood, Bruner, & Ross, 1976). Wood et al. (1976) summarise scaffolding as “the process that enables a child or novice to solve a problem, carry out a task, or achieve a goal which would be beyond his unassisted efforts” (p.90).

It is important that educators adopt a deeper understanding of the theoretical underpinning of the scaffolding metaphor so its use is creative, informed and distinguished from other kinds of instruction (Verenikina, 2008). Effective instruction according to Mariani (1997) requires a teacher to design learning that involves high challenge/high support. This notion, according to some, is useful way for explaining how scaffolding can be effectively implemented to promote learning (Hammond & Gibbons, 2005; Wilson & Devereux, 2014). Mariani’s proposal that the most effective classrooms are those where learners face both high challenge combined with high support represents how scaffolding can be applied within a learning process so students are functioning within their ZPD (Hammond & Gibbons, 2005).
There are factors that some view as critical to the success of the scaffolding process. This includes diagnosis, contingency, and collaborative learning. Smit, van Eerde, and Bakker (2013) claim that, since its conception nearly forty years ago, the interpretation and application of the metaphor ‘scaffolding’ has been modified by scholars yet some aspects remain consistent. In a review by Van de Pol, Volman, and Beishuizen (2010), three key characteristics of scaffolding were identified, included were; contingency (also referred to as responsiveness); fading; and transfer of responsibility (also referred to as handover to independence). An examination of early process models of SRL reveals that contingent relationships were considered a critical component. It is assumed that events from one cycle of SRL are contingent upon events from previous cycles (Ben-Eliyahu & Bernacki, 2015). Similarly, contingency is considered by some to be the heart of scaffolding and certainly highlights the adaptive nature of scaffolding (Van de Pol, Volman, Elbers, & Beishuizen, 2012) and, in turn, diagnosis is essential for contingency (Smit et al., 2013; Wood, 2003). Van de Pol et al. (2012) stress that scaffolding is not characterised by the teacher’s degree of control as such, but rather by the contingency upon the students’ requirements. Finally, contingent support of learning cannot happen unless the learner is actively participating in some form of collaborative interaction and is most important when the learner is struggling (Wood, 2003).

**Engagement-led learning and motivation.** A lack of consensus surrounds the notion of engagement despite its use evolving rapidly in the past decade or so (Fredricks, Blumenfeld, & Paris, 2004; Reschly et al., 2012). Engagement refers to how actively involved a student appears in the learning process and is viewed as a broad multidimensional construct consisting of behavioural, academic, cognitive, and emotional or psychological domains (Reeve, 2012). According to Fredricks et al. (2004), “Engagement is malleable; it is presumed to be both a function of the individual and the context. Thus it can be changed more easily that an individual trait or a general tendency” (p. 83). According to Reeve (2012), motivation (an unseen, subjectively experienced, cause process) provides the source for engagement (an objectively, observed effect). Furthermore, he believes those who investigate motivation do so to understand how engagement is facilitated by motivational processes and those who study engagement are mostly interested in motivation as a source of engagement. With respect to motivation, ‘students who perceive themselves to be acting with a sense of autonomy, competence, and relatedness
during the learning activity experience high-quality motivation, while those who have these three needs neglected or frustrated during instruction experience low-quality motivation’ (Reeve, 2012, p. 151).

Vygotsky and his followers recognise the learner’s interests (or motives) as being just as essential to their development as the development of their mental processes because without their interest, it is impossible to engage learners (Karpov, 2014). The Russian Vygotskian Leontiev, believed that new motives ripen in the context of a current activity (a current motive), in other words, when one starts a new activity for the sake of something else, they commonly end up doing it for its own sake (Karpov, 2014). Vygotskian followers believe that significant others can assist in promoting the development of motives through mediation just in the same way they assist them to acquire new mental procedures (Karpov, 2014). Supporting students to develop interest in learning for its own sake is recognised as development of intrinsic learning motivation. From this perspective, learning can generate learning by engaging the learner, but it is the teacher’s responsibility to design the learning process so it engages the learner.

Not surprisingly, educators have long been interested in understanding what drives learners to engage and regulate their academic behaviours and functioning (Cleary & Zimmerman, 2012). To address this challenge, Cleary and Zimmerman (2012) and Zimmerman and Moylan (2009), propose that to explain how students engage in learning when required to learn in self-regulated contexts, requires a theory that explains the intersection of metacognition and motivation. Cleary and Zimmerman (2012) refer to learning motivation as SRL-engagement, and present a perspective focused on how students become cognitively engaged in learning with the emphasis on their selection, use, and reflection upon, the effectiveness of learning strategies. They propose that engagement in regulatory learning consists of three sequential phases: forethought (i.e. processes that prepare the learner for learning and performance), performance control (i.e. processes that support the learner during learning efforts), and self-reflection (i.e. processes occurring after learning and performance) (Cleary & Zimmerman, 2012; Zimmerman & Moylan, 2009). The processes constituting each phase of this model consist of a combination of metacognitive and motivational procedures.

According to this perspective of engagement, highly SRL-engaged students seek to identify the essential requirements of a learning task by working through the processes in each
phase of the SRL model, resulting in them making adaptive inferences; all made possible by the essential feed-back loop created by the model’s cyclic nature (Cleary & Zimmerman, 2012). Although Cleary and Zimmerman (2012) do recognise that engagement is a broad multidimensional construct, their SRL-engagement model is largely cognitive in nature thus drawing a distinction between the will of students to engage in learning and their skill to regulate their learning (Cleary & Zimmerman, 2012). A more detailed explanation of this phase and process model follows when examining SRL as a construct. With respect to this notion of SRL-engagement, it seems that Cleary and Zimmerman (2012) believe that if students develop the skill to engage in learning then their will to engage may follow.

**Transference.** Contemporary writings on education recognise that the best type of learning is that which is relevant to life outside the classroom and which enables students to transfer their learning to new situations and problems. ‘Near’ transfer refers to application of knowledge learnt in one context and applied to another closely matching, but not identical one; and ‘far’ transfer requires knowledge to be applied to a problem or task vastly different to that experienced previously (Patrick, Mantzicopoulos, & Sears, 2012). Strategies recognised to facilitate transfer of learning are numerous and varied, some general approaches include: providing instruction in similar contexts; highlighting elements that need to be transferred; promoting mastery of knowledge; assisting learners to make connections between new and old learning, develop deep understanding, and last, to achieve fluency with facts and procedures so they can be used nearly automatically (Patrick et al., 2012). Simply stated, transference of learning requires the learner to make connections.

**Self-regulated Learning**

Self-regulation is a critical component of learning and performance. We are not born with the capacity to self-regulate but rather it is a result of adult mediation that provides children with the tools to self-regulate (Karpov, 2014). As a field of research, SRL was designed to discover the cognitive, motivational and behavioural sources of personal mastery during learning. Research into this field began to emerge approximately twenty-five years ago to address the challenge of answering ‘how do students become masters of their own learning process’ and since then, has evolved due to developments in theoretical paradigms and methodologies (Perry & Rahim, 2011; Zimmerman, 2008). Studies into SRL show that getting students to become more
active, strategic participants in their learning is an important pathway to academic success (Azevedo, Behnagh, Duffy, Harley, & Trevors, 2012; Cleary, Platten, & Nelson, 2008; Lau et al., 2015; Malmberg, Jarvela, & Kirschner, 2014; Vandeveldt, Van Keer, Schellings, & Van Hout-Wolters, 2015). Furthermore, self-regulatory processes are a major source of achievement differences amongst students (DiBenedetto & Zimmerman, 2013; Lau et al., 2015; Vandeveldt et al., 2015; Zimmerman & Martinez-Pons, 1986, 1988). Stated most simply, self-regulation of learning matters (Bembenutty, 2008).

Background information to SRL. Contemporary self-regulation has been heavily influenced by Albert Bandura whose work has helped shape its direction and development (Bembenutty, 2008; Dinsmore, Alexander, & Loughlin, 2008). Since the 1960’s, studies have focused on four largely separate bodies of historical research: metacognitive and cognitive issues; self-regulatory processes that are social and motivational in nature; behavioural or cognitive-behavioural processes and, lastly, examination of developmental issues (Zimmerman & Schunk, 2011). During this period, investigations were conducted across these different strands of research before gradually beginning to converge (Zimmerman & Labuhn, 2012). According to Zimmerman and Labuhn (2012), it was following a SRL symposia conducted in 1986 that an inclusive definition of SRL emerged, proposing SRL to be the degree to which students are metacognitively, motivationally, and behaviourally active participants in their own learning process.

Self-regulated learning as a construct. Following the SRL symposia, increased focus in academic settings led to the emergence of a new term, self-regulated learning or SRL (Dinsmore et al., 2008). What seems to separate SRL from its predecessors is its exclusive focus on academic learning. SRL research began in classrooms so the term ‘learning’ narrowly focuses SRL as a construct (Dinsmore et al., 2008). There are two classes of SRL research, one which affixes the term learning to situate it in the classroom, and the other which places self-regulated learning at the centre of the research and thus ‘has more to do with the person-environment interaction’ (Dinsmore et al., 2008, p. 405). This investigation falls into the latter category. Further disparity is whether self-regulation is a trait or a contextualised skill. Conceptual clarity, including deciding if self-regulation is a stable entity or a changeable, teachable skill, holds significant implications for intervention and assessment procedures (Cleary et al., 2012).
According to Dinsmore et al. (2008), an analysis of metacognition, self-regulation and SRL, as terms used in contemporary research, revealed that even though there are distinct histories to the literatures on each field, commonalities in the wording and phrasing were used explicitly and implicitly by researchers to define these terms. It appeared that what aligns these bodies of work is a possible combination of self-awareness and an intention to act. Concluding this analysis, Dinsmore et al. (2008) caution it is an incorrect assumption to believe that metacognition, self-regulation and SRL are synonymous as notions associated to learning, and pleads for researchers to avoid confusion by being more vigilant and careful in their explication of each construct. To avoid this possibility, an examination of the notion metacognition directly follows before proceeding to the discussion of SRL.

**Metacognition.** The examination of metacognition highlights how it is closely related to SRL, evidenced by how most models of SRL combine aspects of metacognition and self-regulation. Many consider it to be a key construct of SRL (Sitzmann & Ely, 2011; Winnie, 2014b). John Flavell forwarded the conceptual definition of metacognition as “thinking about thinking” (Miller, Kessel, & Flavell, 1970). Interestingly, Cleary et al. (2012) believe that a hallmark feature of SRL-engaged learning is exhibiting consistent ‘thinking in the language of strategies’ (p. 242). Flavell operationalised metacognition into four key areas: metacognitive knowledge, metacognitive experience, goals and the activation of strategies. Following, Schraw and Dennison (1994) identified metacognition as comprising of two components: knowledge about cognition (including declarative, procedural and conditional knowledge) and regulation of cognition (including planning, information management, monitoring, problem solving and evaluation). Schraw (1998) later identified the following three skills as essential for improving metacognitive regulation: ‘planning, monitoring and evaluating’ (p. 115).

Recent research by Bryce, Whitebread, and Szues (2015) revealed that metacognitive skills contribute to academic achievement for both five and seven year-olds. Nevertheless, because executive functions contribute to young children’s ability to use their metacognitive skills appropriately, executive functions (still maturing in 5-year-olds) play a key role in how metacognitively skilful children are. This same research revealed that although executive functions are traditionally recognised as necessary for normal functioning, in contrast, metacognitive skills is most likely a more fluid notion. Bryce et al. (2015) propose that
metacognitive skill use “can be considered a person’s propensity to use these skills in everyday situations. As such, it is highly dependent on motivation for the task, emotional state, experience of the task, and so on” (p. 195). This suggests that to promote opportunities for metacognitive skill-use, young students would benefit from being supported with such conditions. Consistent with this inference, Silver (2013) identifies the need to explicitly teach students to develop metacognitive awareness and strategies for how to apply them in a range of situations as one key element of successful instruction.

Students using metacognitive strategies as learning tools is considered highly beneficial; nevertheless, educators need to be mindful of how they teach these strategies (Fadel et al., 2015). Fadel et al. (2015) caution that teaching prescribed instructional procedures (e.g. note-taking) may work in the short term but the skills taught tend not to transfer once the context changes. In contrast, metacognitive strategies that are strategic (e.g. setting and monitoring one’s own learning goals) have been shown to result in more long-term gains. For this reason, Fadel et al. (2015) argue that possibly the most important argument for developing metacognition in learners is because it can improve the application of knowledge, skills and character qualities beyond the original learning context, thus resulting in the transfer of competencies across disciplines – the ultimate goal of all education, especially for learners in the twenty-first century. Similarly, Van Velzen (2016) believes the term metacognitive learning refers to when students specifically learn to use a general knowledge of the learning process to direct their learning and proposes that to prepare today’s students for future life, they must become independent learners who can construct knowledge of their own accord.

Children’s capacity to SRL. Until quite recently, the dominant point of view regarding young children’s capacity to self-regulate their learning or problem solve deemed them incapable until at least nine years or older (Paris & Newman, 1990; Zimmerman, 1990). Although some still query whether young children possess the metacognitive skills necessary for SRL (Veerman, Van Hout-Wolters, & Afferlerbach, 2006), over past years more and more research shows young children are able to regulate their activities (Blair & Razza, 2007; Bryce & Whitebread, 2012; Lau et al., 2015; Vandevelde et al., 2015; Whitebread et al., 2009); however some stress that in general young children require support with SRL (Bryce & Whitebread, 2012; Bryce et al., 2015; Silver, 2013; Whitebread et al., 2009). This is thought to be largely due to their diverse sources of
motivation during the forethought phase, as well as due to their reactive and less knowledgeable use of strategies which is thought to impact their ability to control overt performance (Zimmerman & Labuhn, 2012).

Results from a meta-analysis evaluation by Dignath (2011), assessing students’ acquisition of SRL skills, illustrate that students’ academic self-regulation can be enhanced, even at a young age. This study indicated that early promotion of self-regulated learning does have an impact on young primary school pupil’s academic achievement, on their strategy use and motivation. Research by Zimmerman (2002) revealed that when following Zimmerman’s model of development of SRL, children began acquiring self-regulation skills by modelling and imitating others. Research conducted by Vandevelde et al. (2015) using think-aloud protocols indicates that young children are capable of performing self-regulated behaviour. However, observations revealed only superficial level use and a varied level of use across students. Lastly, research conducted by Lau et al. (2015) revealed that the high-achieving elementary students surpassed the average achievers, who in turn surpassed the low achieving students in self-regulation.

Co-regulated learning. Teachers and peers can contribute much to students becoming self-regulated learners. Co-regulated learning refers to social interactions and instructional contexts that are instrumental towards the development of SRL (Hadwin et al., 2011; Perry & Rahim, 2011). This perspective of co-regulated learning is grounded in the Vygotskian views of higher psychological processes being socially embedded and contextualised (Vygotsky, 1978), and the notion that higher psychological processes are internalised through social processes (Wertsch, 1991). To address the issue of how SRL can be attained, Perry and Rahim (2011) present co-regulation and shared-regulation as distinct social processes by which SRL may be facilitated and, similarly, DiDonato (2013) believes that co-regulation describes those interactions between peers that coordinates SRL processes.

Co-regulation can be considered as a transitional phase through which learners appropriate SRL skills and thus progress towards self-regulation (Perry & Rahim, 2011). When development occurs in response to support from a more capable other, the process is being co-regulated. Co-regulation can be considered as other regulation if a more regulated student (i.e. has a higher capacity to SRL) assists his/her peer to regulate their learning and shared regulation if two or more students jointly assist their peer to regulate their learning (Vauras, Iiskala,
Both approaches emphasise the supportive relationships between peers when learning to SRL. A study by DiDonato (2013) investigated the use of collaborative interdisciplinary authentic tasks as a context in which learners (aged 12-14) develop and use SRL processes. The analysis suggested that student’s individual SRL increased over the course of the project and that co-regulated learning moderated the relationship.

Benefits associated with co-regulated learning includes a reduction in cognitive processing load which in turn may facilitate enhanced metacognitive activity (Whitebread et al., 2009). A further benefit associated with co-regulated learning is that it potentially provides opportunities for the use of joint representation of a task, or what Rogoff (2003) refers to as ‘mutual bridging of meaning’. It is believed that approaches that require learners to externalise and articulate their thinking to others, during guided participation and in shared activities, are key aspects of how people develop (Rogoff, 2003; Whitebread et al., 2009).

In support of social cognitive theory, studies into SRL commonly support the claim that self-regulatory skills originate in others and are influenced by the context in which learning occurs (Hadwin & Oshige, 2011). This perspective is reflected in Zimmerman’s (2002) model of development of SRL (see Table 2.1). According to social cognitive theory, and reflected in this model, is the notion that acquisition of skills generally happens in four sequential phases of self-regulation. This model is thought to be effective for supporting instructional planning for teaching SRL because it aligns well with typical instructional sequences, progressing from modelling to guided practice to independent practice (Schunk & Zimmerman, 2007). Although there is some overlap, the first two levels (i.e. observation/emulation) rely primarily on social factors, whereas the second two levels (self-controlled/self-regulation) depend more on influence by the learner (Schunk & Zimmerman, 2007) thus reflecting a shift of control from expert to learner.

### Table 2.1 Levels of Regulatory Skill

<table>
<thead>
<tr>
<th>Level</th>
<th>Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Observation</td>
<td>Vicarious induction of a skill from a proficient model.</td>
</tr>
<tr>
<td>2</td>
<td>Emulation</td>
<td>Imitative performance of the general pattern or style of a model’s skill and social assistance.</td>
</tr>
<tr>
<td>3</td>
<td>Self-control</td>
<td>Independent display of the model’s skill under structured conditions.</td>
</tr>
<tr>
<td>4</td>
<td>Self-regulation</td>
<td>Adaptive use of skill across changing personal and environmental conditions.</td>
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According to this model, the first level is acquired by observing an experienced model and inducing the major features of a skill or strategy from watching that model learn or perform (Zimmerman, 2002). The second level of regulation is emulation. During this stage, learners engage in imitative performance, self-monitoring, self-evaluation and goal setting. They are capable of imitating only basic patterns of behaviour (Bembenutty, 2008). The third stage, titled self-control, sees the student now capable of independent display of the modelled skills, but only under structured conditions of support. At the self-regulated level of development (the final stage), the learners can systemically adapt their performance to changing personal and contextual conditions (Zimmerman, 2002). They can now vary the use of task strategies and modifying use, based on self-evaluations of outcomes and such adoptions are conducted independently. Zimmerman (2002) cautions that at this final stage, the learner must shift their attention to monitoring outcomes and can only do so when underlying processes have been mastered to the point of automaticity.

With respect to this model, Schunk and Zimmerman (2007) caution that it is not a stage model as such so a learner may not progress in this manner. For example, a learner without models within the environment may bypass stages and learn on their own (Schunk & Zimmerman, 2007). Interestingly, emphasis on internalisation shares similarities with Vygotsky’s (1962) sociocultural theory, which proposes that socially-mediated activity is an important influence on thought. Lastly, according to this model of development, children begin acquiring self-regulation skills by modelling and imitating others, so logically are more dependent on feedback from teachers and their peers. It is not until more advanced developmental levels do learners begin controlling and regulating their learning more independently (Dignath, 2011) and for this reason, young children benefit more from interventions that consider their need for support.

**Phases and processes of self-regulation.** Historically, models of self-regulation have included some aspect of a feedback loop to explain the process individuals employ when managing their learning (Cleary & Zimmerman, 2012). Bandura (1986) first proposed an open cyclical feedback loop based on three recursive social-cognitive processes (self-observation, self-judgement, and self-reactions) and cautioned that information processed via self-observation will unlikely influence an individual’s behaviour or strategy-use, unless the individual first effectively
evaluates their performance. Following this, Zimmerman (2000) developed Bandura’s model to include a more comprehensive description of the three-phase cyclical loop (see Figure 2.1).

Figure 2.1 Zimmerman’s (2000) Phases of Self-regulation


Research by Zimmerman (2002) revealed that when following his model of development of SRL children began acquiring self-regulation skills by modelling and imitating others. Zimmerman (2000) proposes that SRL involves three cyclical phases through which students must work to achieve their goal and develop skills in use of self-regulating processes and sub-processes (listed in Figure 2.1). The theoretical ground behind this model is that learners engage in a cyclical self-regulated learning process during which they establish standards, set academic goals, regulate their beliefs and motivation, select learning strategies to employ, monitor their progress, and self-evaluate their progress as they attempt to achieve their goal. The cyclical nature of this process stems from procedural dependence on feedback from previous performance efforts to make adjustments during current efforts (Zimmerman & Campillo, 2003).

With respect to this model, it is important to note the following points. Each phase is hypothetically interdependent, so changes in one phase impacts the next phase and in turn the next phase (Cleary et al., 2012). Self-efficacy is considered a key variable, affecting all three phases of self-regulation (Cleary & Zimmerman, 2012; Zimmerman, 2000). The cyclical approach
is interactive in that it enables the learner to explain between and within phase relations and between varied metacognitive processes and sources of motivation (Zimmerman & Labuhn, 2012). Because the model is event-based and dynamic, it can be used to measure and guide interventions (Zimmerman & Labuhn, 2012) and can be applied and extended to almost any task or activity so to understand human regulation (Cleary et al., 2012). In general a self-regulatory cycle is completed when self-reflection processes influence forethought beliefs and behaviours, prior to subsequent performance or learning. Finally, students who are trained in multiple SRL phase processes (e.g. forethought and performance phases) tend to demonstrate greater strategic cyclical thinking than those who are trained in one of the phases (Cleary & Zimmerman, 2012; Dignath, Buettner, & Langfeldt, 2008; Vandevelde et al., 2015).

**Cyclical phases of SRL.** In his model, Zimmerman (2000) proposes that SRL is cyclically initiated in the **Forethought** (pre-performance) phase when the student conducts task analysis to set the stage for action. This is achieved through goal setting and strategic planning, which requires personal initiative and persistence, in other words, motivation. During the **Performance** phase, a student actively attempts to utilise specific strategies to achieve success including attention focussing, self-instruction and self-monitoring. **Self-reflection** (post performance) is the third phase, which requires the learner to reflect and respond to their efforts (e.g., self-evaluation, attributions, self-reactions, activity). The sub-processes from Zimmerman’s model found to be relevant to the method and results of this investigation will be next discussed in more detail, including associated research.

**The Forethought phase.** Task-analysis, a sub-process of the forethought phase, requires students to use two key procedures **goal setting and strategy planning**, thus requiring them to analyse the learning task prior to performance. Research indicates young children, novice learners and ‘at risk’ learners display weaker use of forethought phase processes, highlighting how important it is to support students during this stage of their learning process (Bryce & Whitebread, 2012; Whitebread et al., 2009). SRL is intentional and goal directed, so, not surprisingly, goal setting is a particularly important part of the SRL process (Zimmerman, 2000) and is a common element across models of SRL (Winnie, 2014a). It is implicit in most definitions of SRL that, in order for students to attain their learning intentions, they must set goals and plan how to achieve their goals, which requires cognition and the motivation to strive actively to attain
them. Proximal (short-term) goals and distal (long-term) goals have received much research attention, revealing the following implications for the cyclical, self-regulatory process. By helping learners plan appropriate proximal goals, you can assist them to focus and thus, more likely achieve immediate task performance (Zimmerman & Labuhn, 2012). It is also believed that proximal goals provide progress feedback at a time when one’s approach to learning can be modified (Bandura & Schunk, 1981).

A further important feature of goal setting, concerns the level of challenge set by a goal. Research reveals that challenging goals are more effective than easy goals because they require the student to learn more (Zimmerman & Labuhn, 2012). This finding relates to research surrounding mastery-oriented goals, which tends to be linked with more positive processes and outcomes (Butler, 2006; Lau et al., 2015; Zimmerman & Labuhn, 2012). It is also believed that highly self-regulated individuals organise their goal systems hierarchically, with process and subprocess goals associated with more distant outcome goals (Cleary & Zimmerman, 2004; Graham & Harris, 2005; Zimmerman, 2002). This goal system is thought to provide support via direction over time; nevertheless, to achieve goals also requires the individual to choose appropriate methods for achieving them, which is why strategic planning is a further essential key to SRL.

According to Zimmerman and Labuhn (2012), strategic planning as a forethought sub-process, plays a key role in a cyclical phase model of SRL. Naturally, it is closely related to goal setting because a learner’s creation of strategies depends upon the goals being sought (i.e. process versus outcome-based goal) and the set task. Approaches to strategic planning can include a focus on academic skill (e.g. step-by-step planning); control of affect (e.g., trying to control emotions), or organisation of the environment (e.g., moving away from a distracting peer). Children’s strategy development is thought to depend more on their experiences and schooling than their chronological age (Alexander et al., 1998). According to Alexander et al. (1998), children’s strategy-use generally changes in response to increasing familiarity and practice with a task or in a specific domain. More recent research by Kron-Sperl et al. (2008) has since supported this claim.

Research also shows that student goal orientation is an important feature of goal setting (Blackwell, Trzesniewski, & Dweck, 2007). Because forethought is anticipatory, it relies upon various key self-motivational beliefs: self-efficacy, outcome expectations, intrinsic interest and
goal orientation. Past research into sources of motivation for SRL has produced two major goal orientations, mastery and performance and by doing so describes approach and avoidance aspects of each. Typically, mastery approach goals concern learning improvement (i.e. increasing one’s skills), and mastery avoidance goals concern avoiding misunderstanding and perfectionism (Wigfield et al., 2011). Alternatively, performance approach goals involve demonstrating competence and outperforming others, and performance avoid goals involve not looking incompetent in comparison to others (Wigfield et al., 2011). Studies have consistently found that learners who focus on developing competence (i.e., mastery goals) are more likely to seek instrumental help, and those trying to avoid demonstrating incompetence (i.e., performance avoidance goals) are more likely to avoid seeking help or to seek help that is work avoidant (Karabenick & Newman, 2011; Ryan, 2012). According to Wigfield et al. (2011), both goal orientations have implications for the forethought phase of SRL, implications which continue to persist throughout remaining phases of the regulatory process. Stated concisely, students with a mastery-orientation (i.e. a learning focused goal), will seek improvement whereas insecure students with a performance goal avoid being compared to others or being judged in general (Zimmerman & Schunk, 2011).

Goal orientation research by Lau et al. (2015), indicates that learners who set process goals (e.g., to use a specific writing strategy) as opposed to those who set product or outcome goals, demonstrated the motivation to persist on tasks, more strategic strategy-use and adaptive reflections. Previous research revealed that those who set process goals surpassed others in self-efficacy, strategy use, self-evaluated progress, and writing achievement. (Schunk & Swartz, 1993a, 1993b). Results also showed the positive impact of feedback to students (i.e. about their learning process) as well as the positive effects of goal setting at forethought phase on performance, strategy use, self-reflection and writing outcomes (Schunk & Swartz, 1993a, 1993b).

Concisely, it seems effective goals are proximal, appropriately challenging for the individual, are specific to the task and match well to the task. Similarly, Graham and Harris (2013) claim that scientific testing of writing practices reveals that, “Providing students with clear, specific, and reasonably challenging goals improves the quality of what they write.” (p. 14). Finally, learners with an intrinsic interest orientation are considered capable of continuing their
learning efforts despite the absence of tangible rewards (Zimmerman, 2002). This source of self-motivation is thought to be particularly important for when learners must work independently, for example, when sources of reinforcements are not available or are delayed in time (Zimmerman, 2002).

**The Performance phase.** This second phase comprises of two sub-processes – *self-control* and *self-observation*. Students’ use of self-control refers to task-specific procedures (e.g. developing a systematic process for working through a task) and general self-control strategies (e.g. self-instruction, use of imagery, time management, help-seeking, environmental structuring etc…). The purpose of some of these self-control procedures is to support motivation rather than metacognitive processes (Zimmerman & Moylan, 2009). Interestingly, each of the self-control procedures requires students to operate as adaptive learners because how students apply the procedures depends on the outcome of the learning task, which is why self-observation - the other performance phase sub-process is so significant to SRL (Zimmerman & Moylan, 2009).

The self-observation sub-process refers to procedures including *metacognitive monitoring* and *self-recording* (Zimmerman, 2000; Zimmerman & Moylan, 2009). During learning, if a student is SRL-engaged, then they can be seen using self-monitoring or self-recording strategies including tracking their performance against set criteria or reflecting upon their strategy-use (Cleary & Zimmerman, 2012). Of course, the ability to self-observe/self-monitor one’s performance is dependent on the forethought phase processes – namely planning. Research by Malmberg, Jarvenoja, and Jarvela (2013) indicated that the successful use of learning strategies is dependent on pre-planning. Research by Tuysuzoglu and Greene (2015) revealed that adaptive metacognitive behaviour (e.g. strategy-use) related positively to learning and passive metacognitive behaviour related negatively to learning, indicating it is beneficial to help students to recognise how to respond when using metacognitive monitoring.

**The Self-reflection phase.** The self-reflection phase comprises multiple cognitive processes and sub-processes including *self-evaluation*, *causal attributions* during the self-judgement process and *adaptive inference* during the self-reaction process. All of these processes and sub-processes enable students to perceive their learning and performance (Cleary & Zimmerman, 2012; Zimmerman, 2000). Research shows that, following the making of self-judgements, those students who are strategically engaged in learning are more likely to
attribute their performance (be it a success or failure) to the strategies that they used and will make adjustments accordingly in order to improve future performances (Cleary, Zimmerman, & Keating, 2006; Schunk, 2001). According to Bandura (1986), students will commonly choose from three major types of evaluative standards: prior levels of performance, the mastery of specific components of a skill, and a comparison of their performance to that of others. Interestingly, it is believed that students’ goal setting during the forethought phase will impact what type of standard they choose to use during self-evaluation (Zimmerman & Moylan, 2009). Also, a student’s choice of a standard evaluation will affect how they perceive the outcomes from the learning, which in turn will impact motivation (Zimmerman & Moylan, 2009). Causal Attribution, the other self-judgement process can also undermine or power motivation. These attributions are defined as beliefs about the causal implications of personal learning outcomes and relate to the two sub-processes comprising the self-reaction process (namely, self-satisfaction and adaption) (Zimmerman & Labuhn, 2012; Zimmerman & Moylan, 2009). For example, on reflection a student may realise their strategy-use was ineffective (a causal attribution) which will motivate an adaption (i.e. a strategy change). (Zimmerman & Labuhn, 2012). Such an adaption is viewed as an indicator of advanced ability to SRL and is ‘thinking in the language of strategies’ (Cleary & Zimmerman, 2012, p. 242).

Classroom-based Research into SRL

Zumbrunn and Brunning (2013) conducted research to investigate the effectiveness of implementing the Self-Regulated Strategy Development (SRSD) approach to writing instruction. This approach was developed by Graham and Harris (2005) and, according to Cleary and Zimmerman (2012), is an example of how the SRL cyclical engagement model (also referred to as Zimmerman’s (2000) cyclical phase model of SRL) serves as the foundation through which researchers develop and implement engagement-related academic interventions. SRSD is further discussed in a forthcoming section of this chapter with relation to writing instruction.

The SRSD approach to writing instruction involves teaching students various strategies for planning and organising their writing as well as other self-regulation procedures such as monitoring and goal setting. The results indicated the SRSD approach can be beneficial for first grade writers, including aiding the development of their writing knowledge (Zumbrunn & Brunning, 2013). Nevertheless, the following claim by Winnie (2014a) suggests that this type of
systematic approach to SRL is rare. He claims his experience in researching SRL, ‘suggests learners are rarely equipped with a variety of options – tactics and strategies – for carrying out learning’ (p. 235). Similarly, research by Spruce and Bol (2015) revealed that, despite expressing positive beliefs about the role of SRL in learning, teachers’ knowledge of SRL and their capacity to apply it was generally low and commented that they had limited time and space in the curriculum for focusing their teaching on learning process skills.

An issue for SRL research is the disparity between subjective and objective measures of self-regulatory processes (Zimmerman & Labuhn, 2012). Early research into SRL solely relied upon self-report instruments such as questionnaires and interviews which were administered either retrospectively or prospectively (Zimmerman, 2008). Although, development of reliable self-report measures have helped establish SRL as an important construct, critics claimed that these measures do not capture the fine grained, dynamic adaption learners make during and between sessions of learning (Hadwin et al., 2011). A further criticism of measures used in early research was that they were classified as aptitude measures of self-regulation and findings subsequently defined self-regulation as an enduring attribute (Winnie & Perry, 2000). An alternative approach to assessing SRL is to view it as an ‘event’, an example of which is demonstrated in a phase model of SRL which distinguishes students’ efforts to self-regulate, into phases such as before, during and post learning (Zimmerman, 2008). Contemporary research exploring this alternative approach to SRL employs alternative methods of measurement such as observation and qualitative analysis and microanalysis of the cyclical nature of SRL within its social context (Hadwin et al., 2011). This second wave of research, according to Cleary et al. (2012), employs methodologies capable of capturing SRL processes “as they naturally unfold during specific learning or performance tasks” (p. 1).

A microanalytic perspective of SRL. Microanalytic methodology was developed to investigate the role of students’ motivational feelings and beliefs in initiating and sustaining changes in their SRL across three sequential phases: forethought, performance and self-reflection (Cleary & Zimmerman, 2001; DiBenedetto & Zimmerman, 2013; Kitsantas & Zimmerman, 2002). Jarvela, Malmberg, and Koivuniemi (2016) recommend when examining socially shared regulation of learning, that microanalytic methods be used to understand the
sequential aspects of SRL as well as the temporal sequences of individual and shared regulatory activities.

SRL microanalytic protocols are a unique type of structured interview because self-regulation questions are asked as students engage in specific learning activities. These brief questions are asked prior to, during and after engaging in a well-defined task and activity. Therefore insights gained are not reliant on retrospective or prospective reports and evaluation of activity and processes is authentic. According to Cleary et al. (2012), SRL microanalytic protocols exhibit relatively strong reliability and validity. Results from research conducted by DiBenedetto and Zimmerman (2013) suggest that phase-linked microanalytic measures of SRL have potential diagnostic value for guiding instructional interventions in high-school science. A descriptive case-study conducted by Lau et al. (2015) with elementary students revealed that the analyses of the microanalytic measurement approach used in their study provided qualitative and quantitative data for reporting differences in self-regulatory processes across three math achievement levels.

The following discussion of classroom-based investigations into SRL will be limited to studies conducted with young students, and for which individual and social contexts were targets for data collection. A case study by Lau et al. (2015) qualitatively examined how high, average and low achieving elementary students engage in self-regulation in maths. Participants included nine students and their teachers from three different schools. Using a microanalytic methodology, students were asked a series of forethought, performance, and self-reflection process items about specific math problem solving. Results revealed that high achievers engage in more strategic thinking before, during and after math problem solving than average and low achievers. A further finding revealed that students who set process-oriented goals demonstrate not only greater motivation to persist in tasks, but also showed more strategic strategy-use and adaptive reflections of their performance. The researchers recommended that teachers provide guidance for when and how to use SRL strategies.

Research conducted by Perry et al. (2002) qualitatively examined young children’s engagement in SRL and describes how fine-grained analyses of running records enabled them to characterise what teachers say and do to foster young children’s metacognitive, intrinsically motivated, and strategic behaviour during reading and writing classroom-based activities. Observations and interviews from this study provide evidence of young children (K – 3) engaging
in self-regulatory behaviours (e.g. planning, monitoring, problem-solving, and evaluating) during complex reading and writing tasks. A strong recommendation from these researchers was the need to use multiple methods of measurement to triangulate findings from observations and to “not lose sight of the forest for the trees” (Perry et al., 2002, p. 15).

A study by Spruce and Bol (2015) examined teacher beliefs, knowledge, and classroom practice of SRL for ten elementary and middle school teachers. Questionnaires were administered, observations within classrooms were conducted as well as teacher interviews. Zimmerman’s SRL model was used to frame the method and results. The analysis revealed that teachers held positive beliefs about the role of SRL in the classroom but were somewhat unsure of the students’ ability to SRL at these grade levels. Teachers were seen to most provide the students with encouragement during the monitoring phase of learning (i.e. performance phase). It was also during this phase that the teachers could explain most richly how to encourage the student practices of metacognition. Gaps in the teacher classroom practice emerged with respect to the planning and evaluation stages of learning events. A study of the cases revealed non-alignment between teacher beliefs, knowledge and practice of SRL, suggesting the need for continued professional development in SRL strategies and their application to practice.

**Meta-analysis research into SRL.** Meta-analysis research by Dignath et al. (2008) reviewed 48 studies taken from 30 articles on the effectiveness of self-regulatory training with primary school students. The conceptual framework for selecting studies was based on motivational as well as cognitive and metacognitive processes. To guarantee comparable student comparisons across studies, the authors excluded gifted and learning disabled students. The selected studies were classified based on a variety of issues. These included the types of strategies that were taught, such as cognitive, metacognitive, and motivational. The results revealed that most of these self-regulation intervention studies produced not only gains in students’ academic performance but also improvements in their strategic behaviour and motivation. The mean effect size of self-regulated learning training was 0.61 for overall academic performance, 0.73 for enhanced strategy use, and 0.76 for improved motivation.

Interestingly, these studies were also classified based on the theoretical model that guided the study, including metacognitive, motivational and social cognitive/constructivist as well as combinations of these theories. With respect to findings, effects related to the theoretical
background for the study on students’ overall academic performance, interventions based on social/cognitive/constructivist theories had a large effect size of (0.95), whereas interventions based on motivation theories exerted the smallest effect size (0.33). Interventions based on metacognitive theories were medium in their effect size (0.58). Lastly, intervention studies that combined social/cognitive/constructivist and metacognitive theories displayed the largest effect (1.44).

Formative Assessment

It is thought that formative assessment, including the use of Learning Intentions (LI) and Success Criteria (SC), links well with SRL (Clark, 2012; Hattie, 2012; Wiliam, 2014). Poehner (2011) captures the essence of why formative assessment (FA) and SRL cannot be separated when stating, ‘Vygotsky’s writings compel us to view assessment and teaching not as distinct activities but as dialectically fused’ (p. 100). Wiliam (2014) argues that the formative functions served by assessment as being determined by ‘the extent to which they regulate learning’ (p.2), implying that the term formative is not directed to the assessment but rather to the function that the evidence gained from the assessment is meant to serve. It can be reasoned that if assessment (functioning as evidence) is not directing the learning then the assessment is not formative and possibly the learning is not being regulated (Clark, 2012; Wiliam, 2013).

How LI and SC can be shared with students was conceptualised in research conducted by Leahy, Lyon, Thompson, and Wiliam (2005). When attempting to conceptualise FA, Leahy et al. (2005) explored different ways of introducing strategies to teachers as the key ideas of assessment for learning by conducting spaced workshops where specific techniques were shared and following practice back in schools, eventual feedback from teachers was used to identify five broad strategies deemed ‘nonnegotiable’. They include:

1. Clarifying, sharing and understanding learning intentions and success criteria
2. Engineering effective discussions, tasks and activities that elicit evidence of learning
3. Providing feedback that moves learning forward
4. Activating students as learning resources for one another
5. Activating students as owners of their own learning (p.20).
This model has received criticism with some claiming that not all the strategies are focused on assessment - notably those typed in italics (Wiliam, 2014). Interestingly, when Wiliam (2014) relays how this concept of FA was conceived he describes the organising principle as “crossing three processes (where the learner is going, where the learner is right now, and how to get there) with three kinds of agents of classroom (teacher, peer, learner)” (p.8).

The broad use of formative assessment is frequently equated with the term assessment for learning, originally used by Black (1986) and since made popular by others (Wiliam, 2014). Black (2015) promotes the use of assessment for learning believing its value lies in how it can contribute to the core purpose of education – “to develop in students the capacities of independent, effective and responsible learning” (p. 175). Similarly, Clark (2012) proposes that FA actualises and reinforces SRL strategies for students, reasoning that FA guides practice and improves the learning process. According to Wiliam (2014, 2011), activating students as owners of their own learning procedures can potentially produce substantial increases in learning but to do so requires time; time for teachers to develop techniques to support students with self-assessment and time for students to develop their capacity to self-assess their learning and performance.

Learning intentions and success criteria. Adopting a SRL perspective of functional assessment facilitates the development of and sharing of practical classroom techniques (Wiliam, 2014). According to Wiliam (2011), the practice of sharing Learning Intentions and Success Criteria with students is a relatively recent phenomenon and identifies them as techniques for providing formative assessment. According to Hattie (2012), targeted instruction involves two parts; both, he recommends, need to be transparent for the teacher and the learner. The first is being clear about what is to be learned from the lesson (i.e. the LI) and the second is having a way of knowing that the desired learning has been achieved (i.e. the SC). Similarly, Clarke (2001, p. 19) believes that ‘the first active element of formative assessment in the classroom is the sharing of learning intentions with children’. Clarke’s (2001) use of learning intention in a series of books on formative assessment, is what initially made this term popular and since then has regained popularity through its use by Hattie (2012).

Simply stated, a LI is a statement that the teacher constructs to describe clearly to the students what they will know, understand and be able to do following the learning and how this
will benefit them. When constructing LI, it is recommended that they be clear and specific and be a combination of surface, deep, or conceptual knowledge, a combination to be determined by how the lesson is designed to adhere to curriculum (Hattie, 2012). LI can function to clarify type or level of performance and can be either short-term in intent (i.e. relate to part of a lesson) or long-term (i.e. pertain to a series of lessons) (Hattie, 2012). SC are constructed to link to the LI and are developed by the teacher and/or the students to describe clearly what success looks like. According to a model for learning developed by Hattie and Donoghue (2016), students being aware of SC is not necessarily about whether they are motivated to achieve this set target but rather whether they understand what they need to do to achieve success. Hattie and Donoghue (2016) reason that this awareness leads to goal-directed behaviour and therefore students are likely to behave as strategic learners, enjoy their success and strive to achieve future success.

Identifying and sharing the intended learning with students during the learning process; providing them with information on how to proceed with success has been identified to be beneficial to learning (Hattie, 2012; Hattie & Donoghue, 2016; Hattie & Timperley, 2007; Wiliam, 2013). Hattie (2011) goes as far as to suggest that teachers are unlikely to develop good assessment if they do not know what is that they want students to learn. Lastly, there are five essential components of the learning equation (i.e. with reference to LI and SC), they include challenge; commitment: confidence; high expectations; and conceptual understanding (Hattie, 2012). Similarly, Graham and Harris (2005) recommend that in preparation for writing, students should be provided with a general goal that establishes the purpose for writing as well as an elaborative goal that specifies the elements of writing needed to attain the overall objective of writing and Shepard et al. (2005) promotes the elaboration of SC so set targets are clear to the learner. Although the practice of sharing LI and SC with students is a relatively recent phenomenon (Wiliam, 2011), the practice of setting learning goals and planning strategies as a forethought to learning, has been the focus of research in the field of SRL for a number of years (Effeney, Carroll, & Bahr, 2013; Zimmerman & Schunk, 2011).

The practice of sharing LI and SC at the beginning of a lesson is mandated in areas of the United Kingdom and the United States of America (Wiliam, 2011). Similarly, Catholic Education Melbourne promotes careful planning of what outcomes will be assessed and the development of the criteria to be used for assessment; combined with teacher feedback guiding
student reflection and self-assessment (Catholic Education Office, 2009). It is thought that the policies behind these practices were influenced by Leadbeater’s (2004) paper on personalisation. On recognition that a depersonalised approach to education would be unsuitable in the twenty-first century, Leadbeater (2004, p. 59) introduced the notion of personalisation as a solution for connecting the individual and collectives by ‘allowing users a more direct, informed and creative say in rewriting the script by which the service they use is designed, planned, delivered and evaluated’. Leadbeater (2004) argued that the script used by educationalists needed to become customised by engaging learners in setting their own learning targets, devising their own learning plans and goals, as well as allowing them to have a say in how they demonstrate their learning.

**Feedback regulating learning.** A key property of SRL models is their cyclical nature and the need for feedback during ongoing efforts of learning (Zimmerman & Labuhn, 2012). According to Hattie (2011), although considerable variability exists amongst meta-analysis research into feedback, the overall results place it in the top ten influences on achievement, nevertheless he concludes that some forms of feedback are more powerful than others. Hattie and Timperley (2007) reviewed evidence associated with the impact of feedback with a purpose to provide a conceptual analysis of feedback. Building on the notion of closing the gap first proposed by Sadler (1989) (i.e. narrowing the gap between a learner’s present and potential performance in learning), Hattie and Timperley’s (2007) model proposes this gap can be addressed with the following fundamental feedback questions: Where am I going? How am I going? Where to next? Hattie (2011) argues that students who are identified as capable of SRL have the capacity to process feedback and effectively apply it to reduce the discrepancy between what they know and can do now, and what they need to learn next. He stresses that this feedback be timely and given in context.

The level at which feedback is focused can affect its impact (Hattie & Timperley, 2007). Firstly, feedback can pertain to a task or product, and at this level, is more powerful if it builds surface knowledge and/or corrects the learning. The second level pertains to feedback directed at the processes used to produce learning or to complete a task. This level of feedback is most effective when applied to enhance deeper learning and self-confidence because it provides a means for more effective strategy planning and use (Hattie, 2011). The third level of feedback is focused to support self-regulation and therefore is most relevant to this analysis. Depending on
the nature of the task, feedback given may need to progress through the first three levels, that is, from the task to the processes and towards a deeper understanding required for self-regulation (Hattie, 2012). Feedback at the self-regulation level is designed to support self-monitoring, and self-evaluation processes that encourage the student to both seek and accept feedback. Fourth level feedback is directed to oneself and commonly directs attention away from the task, processes and self-regulation, redirecting it towards self-comfort or praise, and although commonly sought by students, it rarely enhances learning.

Research by Wylie and Lyon (2015) investigated the breadth and quality of formative assessment implementation of 202 mathematics and science teachers who participated in a two-year school-based professional development program. The professional development program focused on formative assessment as defined in the research conducted by Leahy et al. (2005), and previously discussed on page 34. The results indicated that although the teachers made significant improvements in some areas, certain areas of formative assessment were less emphasised and aspects surrounding the quality of implementation suggested that a more targeted approach to professional development is warranted. The teachers’ responses indicated that less than half of them described full use of the formative assessment cycle (i.e. by working through all five of the FA strategies proposed by Leahy et al. (2005), indicating the teachers did not use the information gained from using these strategies to design targeted instruction and thus found the formative aspect of FA challenging.

Interestingly in the research conducted by Leahy et al. (2005), classroom questioning was identified to be among the most observable aspects of formative assessment. This was followed by implementation of techniques related to Activating Students as Resources for Each Other, in which less emphasis was placed on peer assessment than collaborative learning. The results from Activating Students as Owners of their Own Learning revealed a greater emphasis on reflection and metacognition than self-assessment. Although teacher-reporting of sharing LI and SC was significantly high, the quality of implementation of this practice was significantly low suggesting professional development programmes should focus on the quality of LI and SC rather than simply recommending that teachers make a statement at the beginning of class. Lastly, the application of formative feedback was considered weak. What the teachers reported sharing with students did not actually meet the definition of formative feedback. It was
recommended that the teachers develop their capacity to provide meaningful comments that include actionable information and to provide stronger support to students so they can internalise the feedback provided so they can apply it to current work.

Research by Harris, Brown, and Harnett (2015) investigated whether peer- and self-assessment can lead to increased SRL and achievement. Hattie and Timperley's (2007) categories from the model discussed above was used to examine the content of a sample of naturally occurring student-written peer- and self-assessment comments ($n = 471$) and to explore the feasibility of using this model with students-generated feedback. Results revealed that students primarily provided task feedback to both themselves and their peers with only self-regulation feedback only being present during self-assessment. The older students tended to provide more task and process feedback, while giving less self-feedback during self-assessment and more during peer assessment. It was recommended that some adjustments be made to the model to capture the quality and complexity of student-led feedback comments. It was concluded that peer- and self-assessment could lead to increased student self-regulation and achievement.

**How Young Students Learn to Write**

Mindful of the belief that learning to write is an immensely complex social, cognitive and linguistic challenge (Coker, 2013), various theories for how students learn to write exist in leading literature, some from distinctly different theoretical positions. Broadly speaking, there are theories supporting sociocultural considerations (including a constructivist’s perspective), metacognitive considerations and semiotic/functional considerations of writing. This next section includes a brief description of how young students’ writing development can be supported and recent research focused on the impact of a writing instructional approach as well as how writing can be analysed using key writing dimensions.

**Sociocultural considerations in support of writers.** It is thought that the key to furthering children’s growth as writers is to tap into their discourse flexibility and their sociocultural intelligence (Dyson, 1993). According to Dyson (1993), this requires teachers to consider sociocultural differences in family and community uses of written and oral language so they can become knowledgeable and accepting of how children talk, because this enables learners to establish a ‘bridge’ between the culture of home and the culture of school. Teachers need to be gradual in the way they introduce new ways of using language (Dyson, 1993). Dyson’s research
revealed that as students gained experience in school, they were observed manipulating and connecting the sometimes-contradictory classroom worlds and their respective ways of using language. As Dyson (1993) states “they brought themes, discourse structures, and styles from their unofficial worlds and used them to stake claims on – to compose texts in – the official school world (p. 19).

When theorising the basics of writing, Dyson (2006) calls for educators “to put centre stage not some abstraction called writing - but children, their language, and their worlds” (p. 38). She acknowledges the common belief that “saying” is essential to young children’s writing. They must draw on speech to grasp the symbolic aspect of the written system and so come to rely on listening to what sounds right to construct and monitor their writing. She highlights the need for teachers of young children to provide instruction, which begins, where children themselves must begin, with their own experiences. Writing conventions must be positioned within children’s everyday lives versus the other way round. Furthermore, curriculum must value “different registers, vernaculars, and languages as options and resources for literacy learning” (p. 36). Finally, she cautions that young children are just “getting their feet on the ground as writers; why pull their linguistic rug out from under them” (Dyson, 2006, p. 36).

Clay (2001) stressed the need that the invitation to write be open ended. Through teacher talks with the child a spoken utterance can become the written message for the lesson. Teachers can support the child to compose oral messages and recount simple events in their lives by helping them with:

- going from ideas
- to spoken words
- to printed messages (p. 27).

Clay (2001) recommended that early writing experiences be shared between teacher and child with initial experiences consisting of the teacher doing most of the writing, then a shift to co-construction and a final shift to the teacher providing little help as the child writes. The idea of giving “lessons in becoming constructive” challenges early intervention professionals to think about the perceptual/cognitive learning required in each lesson activity (p. 5, Clay 2001). Interestingly, despite the complexity of early literacy learning, (Clay, 1991) promoted self-regulation as an achievable goal, stating, “Literacy activities can become self-managed, self-
monitored, self-corrected and self-extending for most children, even those who initially find transitions into literacy hard and confusing” (Clay, 1991, p. 345).

Clay (2001) believed that a theory of children as constructive thinkers could be applied to pre-schoolers exploring writing as well as seven year olds “actively organising and learning from self-initiated experiences” (p. 15). Expansion of writing vocabulary can be facilitated by either fast recognition, slow recall, or thoughtful construction from a small collection of knowledge and words to be solved can be categorised as ‘words still coming under control’ or ‘never- tried-before words’ (Clay, 2001). During this phase, instruction should aim to enable writers to get to new words in many different ways, either alone, or sometimes with easy access (e.g. given correct word), or supported by an expert (Clay, 2001). Clay (2001) advised that an important way for an emergent writers to solve a ‘never-tried-before word’ was to construct the word from the sounds or sound patterns that they hear and for the teacher to provide support by giving them credit for their attempts. Further word solving strategies should also be encouraged, for example, initiating word attempts on a practice page. Essentially, the teacher must be continuously aware of what the writer, already has control over.

Cognitive/motivational perspectives of writing. A cognitive/motivational perspective of writing focuses predominantly on the mental and affective processes employed when composing a text (Graham & Harris, 2013). Adopting a cognitive perspective of writing, Hacker, Keener, and Kircher (2009) argue ‘that writing is applied metacognitive monitoring and control’ (p. 160) and refer to the procedural components of metacognition to explain a theory of writing. Models that use a procedural approach to writing typically include components of metacognition including planning, organising, goal setting, monitoring, evaluating and revising (Flower & Hayes, 1981; Graham, McKeown, Kiuhara, & Harris, 2012; Hayes, 1996). One such model, the process approach shows how complex sub-processes run both parallel and recursively during text composition (Flower & Hayes, 1981; Hayes, 1996). It is reasoned that by working progressively through phases of writing (e.g. planning, drafting and revising) students have greater conscious control over the writing process and are better able to regulate their writing. This approach adopts a problem solving approach to writing and according to Hayes (1996), to be a skilled writer, one needs to be strategic, knowledgeable and motivated and that using the road map provided by the process approach, students are able to develop these skills.
More recently, Graham and Harris (2005) have pioneered a reworked version of the process approach titled Self-Regulated Strategy Development (SRSD) in which writing is considered a problem-solving task that involves planning, knowledge, and skills and includes instruction in metacognitive self-regulation strategies, as well as in task-specific writing strategies (Graham, 2008; Graham & Harris, 2013). There have been many studies on the SRSD approach (Graham, Harris, & McKeown, 2013; Graham & Sandmel, 2011; Zumbrunn & Brunning, 2013). A meta-analysis conducted by Graham et al. (2013) indicates SRSD is a versatile approach to writing instruction, for students of all ages and abilities and can support them to improve writing of different types of text. A study conducted by Baker, Chard, Ketterlin-Geller, Apichatabutra, and Doabler (2009), investigating the quality of the research and evidence base for SRSD for students with and at risk for learning disabilities, revealed it met proposed standards for an evidenced-based practice.

Research by Zumbrunn and Brunning (2013) revealed that appropriate scaffolding (that which meets the needs of each student) is the key to the SRSD instructional model. In their research, six first grade writers were asked to describe the parts of a story before and after the intervention. It was reported that all six students mentioned story elements in their responses before instruction correctly by identifying that stories have a beginning, middle and end. After the lesson, all six students were able to recall the seven essential story components by using the scaffolding strategy taught to them during instruction. Using a SRSD model of instruction, their teacher taught them to use a mnemonic that assisted them to recall seven essential story components. It was concluded that the SRSD intervention seemed to add and clarify their story schema, and overall, appropriate scaffolding can meet the needs of first grade writers.

A Semiotic/functional approach to teaching writing. From the perspective of those who promote a functional approach to writing instruction, successful writers need to develop an understanding of how language functions. This includes being able to read, understand and write a variety of text types of different purposes e.g. to describe, narrate, analyse, explain, recount, argue, review (Derewianka, 1990; Derewianka & Jones 2012). Over the last twenty-five years or so, Australian teachers have been using a functional approach to language, drawing on the works of Halliday (1990), who views language as a meaning making system through which we both interpret and shape our world (Derewianka & Jones 2012). Halliday's model focuses on the
relationship between linguistic form and the meanings being established by those forms in context thus viewing language as a source for making meaning (Christie & Derewianka, 2008).

Halliday's model is the basis of the genre-based approach developed by a group of leading linguists including Derewianka (1990), Christie (2005), Martin (1989) and Martin and Rose (2008). Their core aim was to make the language demands of the curriculum explicit. To achieve this goal they examined the various purposes for which students need to use language across all areas of the curriculum and identified a number of key genres, for example, procedures, narratives, explanations, information reports, recounts and arguments (Rossbridge & Rushton, 2015). A genre-based approach to teaching writing, involves the teaching of concepts associated with genre theory. These concepts include the notion that key genres/types of writing have a specific purpose, structure and relevant language features. Students are taught that each genre has a typical and thus recognisable structure that unfolds across the text to achieve its social purpose. Students are taught to use metalanguage that enable them to talk about and reflect upon language choices in texts, which they are exposed to across curriculum contexts (Rossbridge & Rushton, 2015).

**Instructional procedures in support of writing development.** Specific instructional procedures designed to provide comprehensive support of writing have been implemented in classrooms for the past two decades (McCarrier, Pinnell, & Fountas, 2001). Such procedures commonly include modelled writing, language experience, shared/interactive writing, guided writing and independent writing. These procedures reflect the Gradual Release of Responsibility Model developed by Pearson and Gallagher (1983) so when implemented appropriately, the regulatory control of writing gradually shifts from teacher to student. The Gradual Release of Responsibility Model was based on concepts developed from Vygotsky’s theory of learning, including scaffolding and zone of proximal development.

Typically, writing instruction using the gradual release of control approach begins with the teacher providing an explicit demonstration of writing to the whole class (i.e. modelled writing) while verbalising corresponding thought processes. This modelling is usually combined with the language experience procedure which involves the teacher and students jointly using a shared experience as a basis for the composition of the text, while the teacher demonstrates writing. Building on from the modelling the teacher may engage the students in shared writing/interactive
writing during which the text is composed and constructed collaboratively as the teacher gradually releases control and the students become more active in the writing process. These methods can be effectively used with either a whole class or small group and commonly students are invited to share the pen. All three of these writing procedures are recognised as effective methods for supporting young learners to become writers because they are specifically designed to support young learners as they are just to develop an awareness of reading and writing (Roth & Guinee, 2011).

Following the lesson introduction/whole group instruction, the teacher may select a group of students with whom guided writing is implemented to build on the writing concepts and behaviours taught during the introduction. In guided writing the group of students typically has similar writing learning needs and they are grouped to focus the learning on an identified need. This grouping should be based on assessment (McCarrier et al., 2001). During guided writing the student writes an individual text as the teacher provides explicit instruction and timely feedback. The students are supported with scaffolding that is designed to meet their instructional needs. As reflected in Pearson and Gallagher’s (1983) Gradual Release of Responsibility Model and research, it is expected that students actively self-monitor and reflect upon the effectiveness of the strategies that they use as well as their overall writing performance. Pearson and Gallagher (1983) stressed that during guided practice, feedback from the teacher is a critical component if the control is to be released to the student. They suggested that feedback be suggestive rather than corrective and to expect students to consider alternative strategies if what they used, were not effective.

During independent writing instruction the writing is not directly led by teachers. Alternatively, teachers are expected to provide contingent support to writers, not necessarily following a specified sequence but rather operating by a responsive model of teaching (Clay, 1975). The teaching is determined by the strengths and weaknesses of the writers (Roth & Guinee, 2011). During independent writing, students are encouraged to work together to solve problems and, thus, this approach is grounded in a social constructivist approach to learning. To summarise, the effective implementation of these procedures involves a teacher beginning instruction with explicit modelling then moving to various forms of shared and/or guided practice to eventually engaging the students in independent writing.
Aspects of writing central to early writing development. During this study, the potential links between student capacity to engage in SRL and writing were examined using a writing analysis tool developed by Mackenzie, Scull, and Bowles (2015). In research conducted with Year 1 students, Mackenzie et al. (2015) investigated the aspects of writing central to writing development. An analysis of 500 writing samples collected from 250 students was conducted (samples were collected at two points in times – approximately five months apart). A finding from an earlier stage of the study included the conceptualisation of students’ early writing, based on an analysis process that integrated authorial and secretarial dimensions of writing. These six writing dimensions included text structure, sentence structure, vocabulary use (the authorial dimensions of writing); and spelling, punctuation and handwriting (the secretarial dimensions), and are what headed a writing analysis tool used to analyse the students’ writing development. The results showed levels of attainment and changes specific to these six dimensions, providing teachers with evaluative data for planning instruction.

Chapter Summary

In the proceeding sections, theory and research underlying this study was presented and classroom-based research into SRL was discussed providing a strong body of evidence in support of SRL. Although previous research has investigated how different instructional or social contexts influence student SRL (Perry et al., 2002), they have not necessarily examined the interplay between social context and regulation. Further, it was revealed that to-date there is limited research into SRL as an event that happens in real time in authentic classroom settings, particularly research that examines how co-regulated learning leads to SRL or how young writers acquire SRL skills (Perry & Rahim, 2011). The various theoretical explanations for how young students learn to write were presented, including what aspects of writing are central to the writing development of Year 1 writers (Mackenzie et al., 2015). Following the examination of literature, it was determined that it is important to investigate what Year 1 writers do when attempting to SRL; not just what they say they do. Therefore, methodologies that can assess students regulating their learning to various degrees, whilst participating in real tasks, in real time, is what is now required (Perry & Rahim, 2011; Spruce & Bol, 2015).

Simply stated, the intention of this investigation was to examine how teachers supported Year 1 writers to self-regulate their learning with the aim of developing a substantive theory for
how Year 1 writers can be supported to engage in SRL. This required examination of how self-regulated learning was promoted by teachers including what learning they aimed to provide and what learning processes and practices were observed occurring.

In the next chapter, the methodology underpinning this investigation will be discussed, beginning with a rationale for choosing a qualitative research approach positioned in a constructivist research paradigm, followed by discussion of the philosophical positioning of this research. The sample strategies used for the research will be discussed along with the information required for the study and its context. Following on, the overall research design and methodology will be outlined and a research design flowchart is provided to illustrate the steps involved in each phase of the research strategy. Next, each phase will be described in detail, including all methods and procedures used and a rationale for why each was selected and how each was used. Then, procedures for data analysis and synthesis will be explained before concluding with discussion of the criteria expected from grounded theory studies.
Chapter 3: Methodology

The previous chapters revealed that there is very little research of how young children self-regulate their learning in authentic educational settings, particularly when first learning to write. The broad research question for this study was *How were Year 1 writers supported to engage in SRL?* However, the interpretive purpose of this study warranted the possibility of other questions emerging. The processes of generating and refining research questions are critical to the shaping of a qualitative study, reflecting increased understanding of the problem (Agee, 2009; Charmaz, 2014).

The first section of this chapter provides a rationale for choosing a qualitative research approach positioned in a constructivist research paradigm and includes discussion of the philosophical positioning of this research. Next, discussion proceeds to what sample strategies were used, following which the context for the study is described. The overall research design and methodology is then outlined following which the preparations for the fieldwork are described and a description of work in the field. An overview of how the findings were developed is next presented before the chapter concludes with brief comments of issues of trustworthiness and a chapter summary.

Rationale for Research Methodology

The interpretive tradition chosen for this qualitative inquiry aligns with the theoretical perspectives associated with constructivism. An instrumental case study design was chosen to investigate the social phenomenon under investigation and constructivist grounded theory method was selected to structure the collection and analysis of data (Bryant & Charmaz, 2007; Charmaz, 2000, 2014). Discussion below includes philosophical perspectives that inform the choice to employ a qualitative inquiry positioned in constructivism. It should be noted that the terms *constructivism* and *social constructionism* tend to be used interchangeably despite some defining differences (Andrews, 2012). To distinguish, Andrews (2012) states “constructivism proposes that each individual mentally constructs the world of experience through cognitive processes while social constructionism has a social rather than an individual focus” (p. 39). Charmaz (2014) believes constructivists “view knowing and learning as embedded in social life” (p. 14). Throughout this paper and consistent with Charmaz’s (2014) view, the term constructivism will be used.
**Rationale for qualitative inquiry.** The methodological choices underpinning this study recognise that the processes associated with contemporary learning and teaching, are both unique and complex and that fresh perspectives and approaches are very much warranted to address presenting challenges (Fadel et al., 2015; Fullan & Langworthy, 2014). This study examines this issue from the perspective of social processes, which is recognised as one of a few possible approaches to explaining the phenomenon under study. Given consideration of the research problem, positioning of the research and the stance of the researcher, it was determined that a qualitative approach would be taken (Drake & Heath, 2011). After all, the data methods required to address research problems and questions associated with social inquiry undoubtedly are qualitative in nature (Charmaz, 2014; Merriam, 2009; Mertens, 2010). Constructivists, according to Burr (2003), find explanatory power through the dynamics of social relationships.

The methodological aim of this study was to achieve an objective interpretation of the authentic interactions between the teachers and students participating in this study; as well as the language they use to construct their reality. Characteristics associated with a qualitative study are it is interpretive, experiential, situated and personalistic (Stake, 2010). Consistent with beliefs associated with the constructivist paradigm, those choosing to use qualitative study methods typically do so because they seek to understand the world from the perspectives of those living in it. It is assumed that by studying a social setting, what they are investigating is unique, dynamic and complex (Charmaz, 2014; Hatch, 2002; Mertens, 2010). As stated by Stake (2010) “qualitative researchers seek data that represents personal experience in particular situations” and the data they collect “are personal happenings in time and space” (p. 88). This is certainly the case in this study, because the aim of this study was to further understanding of a social phenomenon through the perspectives of the individuals involved.

It was during the first phase of the 1980s paradigm wars that qualitative research established its rightful place within the interpretive community (Denzin, 2008). Approaches to qualitative analysis can take many forms (Whiteley, 2012) although, typically, qualitative based research is conducted in a naturalistic setting with a level of interactive inquiry (Schreiber & Asner-Self, 2011). According to Stake (2010), “Qualitative research has moved social research away from an emphasis on cause-and-effect explanation toward personal interpretation” (p. 31).
Qualitative methods of inquiry are considered non-experimental by design (Schreiber & Asner-Self, 2011) and for this reason, the reliability of results are questioned by those who lean towards a more scientific approach to research. Nevertheless, as Bogdan and Biklen (2003) state “part of the scientific attitude, as we see it, is to be open minded about method and evidence” (p. 37). Qualitative designed research on the other hand, typically focuses on the process as opposed to the product because its design is largely based on an ongoing process of questioning, reflection and interpretation so understanding can be elicited from other’s experiences and perspectives (Agee, 2009).

Following consideration of how the problem and the research question underpinning this study could be addressed methodologically (i.e. this involved deliberation of what it means to operate from quantitative or qualitative designed research within various methodologies), a qualitative design was determined the most appropriate approach (Bogdan & Biklen, 2003; Drake & Heath, 2011; Mackenzie & Knipe, 2006). It was decided that methodologies “ideal for coming to understand the lived experiences of the researched” (Lincoln & Guba, 2013, p. 88) was what was required. Nevertheless prior to deciding to employ a qualitative design, the assumptions that underpin the goal behind this research were further reflected upon; these reflections are alluded to in the following section.

**Philosophical positioning.** Throughout this study, methodological assumptions reflecting ontological and epistemological assumptions were considered (Waring, 2012). Although researchers must assess what is witnessed objectively, interpretivist epistemology searches for subjective beliefs that are co-created between the researcher and the researched (Lincoln & Guba, 2013). As Lincoln and Guba (2013) state “transactional subjectivism is the basic presupposition of constructivism” (p. 40). Throughout this study, although epistemological theoretical perspectives will be oriented towards constructivism, ontological presuppositions of subtle realism were accepted (Burr, 2003).

Some may disagree with Andrews (2012) who states that being a realist it is not inconsistent with being a constructivist. However, rather than take the extreme stance of relativism like most constructivists, this study is framed in Hammersley’s (1992) perception of subtle realism, which pertains a view positioned midway between the polar opposite beliefs, relativism and realism (Ritchie & Lewis, 2003). Consistent with the idea of subtle realism, reality
exists independent of our perception and it cannot be directly accessed (Hammersley, 1992). Nevertheless meanings can be shared so the possibility of collective understanding is acknowledged (Ritchie & Lewis, 2003). After consideration of the polarising beliefs, namely that there are objective realities, and there are multiple realities the position of subtle realism was adopted, largely because both views of reality are problematic for qualitative research (Andrews, 2012; Cohen, Manion, & Morrison, 2011). As Andrews (2012) points out, the “adoption of a realist position ignores how a researcher constructs their interpretations thus assuming that what is reported is a “true and faithful interpretation of a knowable and independent reality” (p. 42) whereas relativism suggests that nothing can ever be known for sure as multiple realities means there is no possibility of a precedence of claims.

The following statements are a sum of the assumptions underpinning this study. Knowledge resulting from this research was developed through a process of interpretative inquiry, so it was assumed that direct knowledge would not be possible but observations could provide indirect indications of phenomena (Waring, 2012). From a position of subtle realism, it is acknowledged that this study did not seek to prove or disprove any previously held theoretical positions but rather to gather, compare, reflect upon, interpret and analyse data, with the aim of contributing by extending conceptual understanding of a specific phenomenon, namely – the social processes associated with how students engage in self-regulated learning.

**Rationale for an instrumental case study design.** An instrumental case study design was considered viable when designing this investigation with respect to the focus of this research. Three Year 1 teachers and three of their students operating in one primary school, formed the case in relation to this inquiry. This case study functioned as a case, enabling the investigation of a phenomenon holistically and in its natural environment (Stake, 2005, 2010). Swanborn (2010) defines case study as “the study of a phenomenon or a process as it develops within one case” (p. 9). This is consistent with Stake’s (2005) view that researchers do not choose to use case study as a method but rather they chose to examine a functioning specific (e.g. a student or a classroom), a perspective that differs to Yin (2013) who views case study as a strategy or method.

A great many questions in educational research are either “how” and “why” questions and generally case studies are the preferred strategy to address such enquiries (Willis, 2008; Yin,
Bearing in mind that the overall research question behind this study is a “how” question, such clearly guided the design of this research towards a case study. When determining what type of case study would be most suitable, the term instrumental was thought most relevant because the ultimate purpose of the actual case in focus was to investigate social processes in support of SRL as opposed to the setting and the participants themselves.

According to interpretivists, when research is being conducted in natural contexts (e.g. classrooms), the what and who being observed cannot be and should not be controlled. This is one of the greatest advantages of case study method (Stake, 2006; Willis, 2008). Simply stated, case study design was chosen because the nature of the process involved in this method provides:

- in-depth and first hand understanding (Yin, 2006)
- opportunity to observe a social processes in its natural setting (Flyvbjerg, 2011; Stake, 2005; Yin, 2013)
- a detailed examination so rich description and analysis of social phenomenon can occur (Stake, 2006; Swanborn, 2010; Yin, 2006, 2013)
- versatility and flexibility by accommodating a vast variety of purposes whilst providing opportunities for the use of a broad range of data sources (Stake, 2005; Swanborn, 2010).
- insights that can contribute to policy, practice and future research (Merriam, 2009; Yin, 2013)
- the researcher with the opportunity to deal with and observe several stakeholders, each with their own perspective (Swanborn, 2010)
- a holistic approach so the dynamics of a social unit can be maintained (Swanborn, 2010)
- a focus on developmental factors because a case evolves in time, at such a time and in such a place (Flyvbjerg, 2011)
- high conceptual validity (Flyvbjerg, 2011).

Furthermore, a case study design provides support for grounded theory method research, because themes, concepts or possible theory can be developed further when supported with rich and thick contextual description (Bryant & Charmaz, 2007; Charmaz, 2000, 2014).
Rationale for a constructivist ground theory method of inquiry. A constructivist grounded theory method (CGTM) was chosen for this research due to its potential to support the studying of social phenomena (Charmaz, 2014). It was anticipated that this method would support understanding in the form of emergent themes, leading to a contribution to substantive theory (Charmaz, 2014; Urquhart, 2012). Those using this method typically select it because they believe concepts provide ways of thinking about and arriving at shared understanding among professionals. An underlying assumption of the overall grounded theory method (GTM) in general is that concepts pertaining to the phenomenon being studied have not been identified, or are not fully developed or are poorly understood (Corbin & Strauss, 2008). Barry Glaser and Anslem Strauss jointly conceived and wrote GTM as a method for data collection and analysis for the purpose of generating substantial theory (Glaser, 1978; Glaser & Strauss, 1967). Classic grounded theory as a specific methodology is associated with Glaser (1978) who states, “the goal of grounded theory is to generate a theory that accounts for a pattern of behaviour which is relevant and problematic for those involved” (p. 93). It was proposed that generated theory works from multiple perspectives gained from multiple slices of data (Glaser & Strauss, 1967). Since classic GTM was introduced, other scholars have developed the method into approaches using basic grounded theory guidelines with twenty-first century methodological assumptions and approaches (Charmaz, 2014).

Throughout this research process a constructivist version of GTM was applied based on methods developed by Charmaz (2014) who along with Bryant (2009) and Clarke (2005), are considered second generation grounded theory developers. Charmaz’s (2014) approach to GTM takes into account the theoretical and methodological developments of the past four decades. A constructivist approach to GTM sees data and analysis as created from shared experiences and relationships with participants and other data sources. Therefore, the perceptions of the participants were considered during the analysis conducted during this study. This interpretation of how the participants created and expressed their understanding of reality informed the concepts underpinning the findings. Theory developed through constructivism research are seen as mere views of reality as opposed to the true reality. Charmaz’s (2014) grounded theory in its constructivist version (CGTM) consists of a set of principles and flexible guidelines to inform research practice to clarify what grounded theorists do. It is not a set of methodological rules and
requirements (Charmaz, 2014) and more directly aligns GTM with the language and underlying assumptions of qualitative research (O'Toole, 2010).

The constant comparative method is one of two foundational ideas behind GTM, the other being theoretical sampling (Schurman, 2013). According to Bryant and Charmaz (2007) the purpose of constant comparison is to “tease out the similarities and differences in order to refine concepts” (p. 154). The essential purpose of theoretical sensitivity is the ability to generate concepts from data so they can be used to form theory (Schurman, 2013). According to Charmaz (2014), theoretical sensitivity involves using in a sense, both inductive and deductive reasoning and that the overall process of GTM invokes abductive reasoning. These methodological concepts both drive development of emerging theory from data collected, and effectively elicit these data so that it is not dependent on preconceived theories. They provide for a detailed and rigorous process of analysis (Tuettemann, 2003), and, as Urquhart (2012) points out, they do so via “a bottom up technique” (p. 2).

This research method is considered unique because the analysis of the data is done concurrently with data collection (Schurman, 2013) and by employing theoretical sampling, decisions are made during the research process as to what data need to be sought next for conceptual clarity (Hood, 2007; Stern & Porr, 2011). Glaser (2012a) claims, that in this method, data are discovered and used “for conceptualisation to be what it is – theory” (p. 28) as opposed to description alone. The GTM process shapes the conceptual and content and direction of the study (Charmaz, 2014). Therefore, the writing of theory is done as theory emerges and not left until after the research is done. Glaser (2012b) believes that by offering a systematic way to collect data and generate theory from data collected, GTM provides the researcher with inspiration and readiness to write. Charmaz (2014) believes that “using inductive data to construct abstract analytic categories through an iterative process” (p. 15) as opposed to merely sorting topics, is what distinguishes GTM from general approaches to qualitative research. It should be noted that some scholars view GTM as a tradition that should be used as a full methodological package (Breckenridge, Jones, Elliott, & Nicol, 2012) whilst others appear to use it more as a technique for coding and analysing data, and not as a method for generating theory (Urquhart, 2010).
When using classic GTM the researcher maintains a position of distant expert (Charmaz, 2000). For example, interviewing is very passive when conducted through classic GTM (Glaser, 2012a). The key role of the researcher using classic GTM is to be a data collection instrument (Merriam, 2009). It is through constant comparisons and use of analytic induction that they can ensure that the data and not their impressions are what drives the findings (Merriam, 2009).

Unlike Glaser’s classic approach, a Constructivist’s Grounded Theory Method (CGTM) approach does not view the research process as an objective process (Chamberlain-Salaun, Mills, & Usher, 2013). In contrast, CGTM encourages a deeply interactive process in which the researcher is part of what they study, not separate from it (Charmaz, 2009, 2014) and it is specifically for this reason that a CGTM approach was selected for this study.

A further and significant point of difference between Glaser and Strauss’s classic GTM and Charmaz’s approach, is that Charmaz (2014) does not assume that data and theories are discovered as such. Instead, Charmaz proposes that grounded theories are constructed through the researcher’s past and present involvements and interactions with the participants. This interpretation of these experiences along with insights gained from the perspectives of the participants and the research process, is from what theory is rendered and what is then offered is a portrayal of the studied world and not an exact replica of it. (Charmaz, 2014).

The following reasons determined CGTM as the principal method of inquiry for this study. It is believed that GTM and CGTM provide a systematic approach to data collection and coding for investigating social phenomena (Bryant, 2009; Charmaz, 2014; Corbin & Strauss, 2008; Glaser, 1978; Glaser & Strauss, 1967). The deep learning experiences provided by the CGTM process enables the researcher to connect with and understand existing theories at a deeper level, whilst also providing insight to new pedagogies emerging from within an authentic learning setting. Furthermore, it is a particularly useful approach to investigate a phenomenon that is relatively unexplored (Thornberg, 2012) and the fluid, interactive, and open-ended process that it provides can complement other qualitative analysis procedures rather than stand in opposition to them (Charmaz, 2014). By providing a chain of analysis to accompany rich description, the CGTM process not only provides rigour but also contextualises findings and directly assists reporting. In addition, the creative and highly analytical aspects provided by this method are appealing. A final and convincing influence for choosing CGTM were provided by
Charmaz’s reflections on lessons learnt from studying under Glaser and Strauss. Charmaz (2011) states, “I recall Barney and Anslem each saying that students would adopt and adapt grounded theory to fit their research and practical problems” (p. 182).

**Purposeful Sampling Strategies and Participant Information**

Consistent with previous research conducted within the constructivist paradigm, sampling strategies employed were based on the goal of identifying information-rich cases that would provide for an in-depth study (Mertens, 2010). Further to this, it was considered that when using CGTM, the researcher is an active sampler when pursuing leads and participants for their varied perspectives (Charmaz, 2014), and the belief that all is data (Glaser, 1978). *Purposeful sampling* is a method that is typical of both case study designs and GTM approaches (Stern & Porr, 2011) and for this reason, was a clear choice for this study. Therefore, this study was launched with a purposeful sample of participants whose selection was based on their potential to provide “rich in-depth accounts and provide data that are conceptualisable” (Stern & Porr, 2011, p. 51).

It was recognised that the case selected held the potential to represent the phenomenon under study (Swanborn, 2010). The criterion for the selection of the school was whether they promoted the use of pedagogical practices in support of personalised learning and if the teaching staff were dedicated to developing their students’ personal and social capabilities. The criteria for selection of teacher participants from within this setting were based on them being teachers of Year 1 students. The teacher participants had no formal training in SRL, however, the Australian Curriculum is designed to support teachers to develop a shared understanding of the nature, scope and sequence of general capabilities (Australian Curriculum Assessment and Reporting Authority [ACARA], 2013). The curriculum includes the knowledge, skills, behaviours and dispositions required for students to develop their personal and social capabilities in such areas as self-awareness, self-management, social awareness and self-management (see Appendix A).

**Maximum variation sampling.** In order to obtain development in pattern and trajectory of behaviours, and capture possible variation in social processes (Stern & Porr, 2011), a sufficiency of variation and numbers of participants was required for this study. To address this need, *maximum variation sampling* was employed (Glaser & Strauss, 1967). As Stern and Porr (2011) state
You will want to grow concepts on several slices of data of all shapes, sizes and colours…as abstract concepts emerge you will want to discern the boundaries of your theoretical ideas by applying your new constructs to similar and different situations, and under other conditions and contingencies (p. 51).

To achieve the variation required meant that a minimum of three teachers was deemed necessary, each responsible for a separate learning community and all three with varied professional backgrounds and experience. It was from within each learning community that the next maximum variation sampling was conducted.

Three students from each learning community were selected by their teachers based on their varied capacities to engage in SRL (i.e. one low, one average and one high). When beginning this study the Australian Curriculum (ACARA, 2013) was the official curriculum for Victorian schools so it was suggested to the teachers that they base this selection on the standards outlined in the personal and social capability section of the curriculum (See Appendix A). In the Australian Curriculum, it is claimed, "students develop personal and social capability as they learn to understand themselves and others, and manage their relationships, lives, work and learning more effectively” (ACARA, 2013). The personal and social capability learning continuum is organised into four interrelated elements; self-awareness; self-management; social awareness, and social management. The two elements most relevant to the focus of this study are self-awareness and self-management. The teachers were each asked to identify three students who have consistently demonstrated low, average, and high capacity in both elements.

**Theoretical sampling.** Theoretical sampling was employed in this study as an ongoing sampling strategy. Glaser and Strauss (1967) advocate that this procedure be implemented when collecting data and that the interpretation and analysis of data occur concurrently with data collection (Swanborn, 2010). This meant that during the research process decisions as to whether further data were required were made (Stern & Porr, 2011). When conducting CGTM, initial sampling is where you start and theoretical sampling directs you where to go next (Charmaz, 2014). The essential purpose of this sampling strategy was to elaborate and refine the categories constituting the emerging themes (Charmaz, 2014). Theoretical sampling was continued until it seemed there were no more new properties emerging and thus categories were saturated (Charmaz, 2014; Glaser & Strauss, 1967).

An example of theoretical sampling conducted during this investigation was when following initial coding of the first round of interviews and observations, it was realised that certain
leads needed to be pursued in subsequent interviews, and so tentative focused categories could be refined in preparation for the eventual construction of a theoretical category. An example of this was with respect to the early emergence of the focused category *An intentional learning process*. This category become apparent by the regular referencing by teachers to the use of *success criteria and learning intentions* as a strategy to support students to SRL. Although there were quite a few references made in the first round of interviews, these references lacked explanation so theoretical sampling was employed by using focused questions during the next round of interviews to clarify relationships between emerging categories and deepen understandings of what was meant by these references. Two focused questions used during the second interviews include:

*You displayed and referred to success criteria in your lesson, how do you think this practice supports the students to SRL?*

*How do you go about planning learning intentions and success criteria?*

Following analysis of these second interviews, it was determined, that even further clarification was required so the following focused questions were asked during the third interviews.

*Do students typically have personal goals as well as the success criteria you set them? If so, how do they decide upon/construct their personal goal?*

*How do you insure that students know what strategies to use in order to achieve their success criteria?*

The Context: Site and Population

This investigation was conducted over one school year, extending from the second week of March through to the second week of December. The three female teachers and nine student participants in this study were members of a junior learning community within a Catholic primary school, situated in Western Melbourne, Victoria, Australia. The school in which approximately 550 students are enrolled, is a culturally and linguistically diverse community. The school is designed with open learning spaces and has been constructed with the purpose of facilitating pedagogy of personalised learning.

**Teacher participants.** There were five Year 1/2 classes in the junior learning community. Three teachers from these five classes were invited to participate with the aim of protecting the anonymity of a small sample, pseudonyms were given to the teacher participants.
The teaching background of each participant is presented below in Table 3.1. To provide a representative cross section of ability, each teacher was asked to select three students who each demonstrate low, medium or high personal or social capabilities as described in the Australian Curriculum excerpt included in Appendix A (Australian Curriculum Assessment and Reporting Authority [ACARA], 2013).

Table 3.1 A Summary of Teacher Background Information

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Years teaching</th>
<th>Years teaching at junior level</th>
<th>Years teaching at this school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adele</td>
<td>30</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Maree</td>
<td>18</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>Sharon</td>
<td>3 (relief teaching = 2 Years, first Year as a class teacher)</td>
<td>1st Year</td>
<td>1st Year</td>
</tr>
</tbody>
</table>

Source: Term one interviews

Student participants. Nine Year 1 students were selected for this investigation (aged between 5.9 and 7.9 Years old). Year 1 is the second Year of formal schooling for students attending schools in Victoria, Australia. The language backgrounds informed the selection processes. It was intended that this study focus on students who use English as a first language and who demonstrated ability to use English competently to communicate and for classroom purposes. The inclusion of students using English as a second language would have confounded the focus of the study by introducing levels of bilingualism, levels of biliteracy and English interlanguage levels.

Preparing for Fieldwork

Prior to entering the field to begin research, an ongoing and selective review of literature pertaining to the area under investigation was conducted to inform this study. Following this, further literature was reviewed to inform the study’s methodological approach. When confirmation to proceed with research was awarded, the final action required for entering the field was to seek ethical approval. Each of these actions are described in the following section.

Pre-data-collection literature review statement. The review of literature early in the research process is a controversial issue with respect to those who use GTM. Avoidance of a pre-framed professional interest perspective is what is advocated by supporters of classic GTM (Christiansen, 2011). Simmons (2011) states, “A critical tenet of grounded theory is to minimise, not encourage preconceptions” (p. 24) and by entering the field with preconceived questions and
categories can risk emergence and grounding being derailed. Christiansen (2011) reasons, “The research problem, when empirically discovered from behavioural data, may be very different from what the extant or originally identified literature assumes” (p. 22). Christiansen (2011) advises that use of classic GTM is meaningless if one chooses to study the literature as the first stage of the research process, particularly if this search has a deliberate purpose to define the research problem.

Very early in the research process, this researcher acted upon Charmaz’s (2014) recommended approach where the researcher takes a critical stance toward earlier theories. It was thought the most logical pathway into this study, was to establish a stance of disconfirmation to help prevent bias by preconceptions formed during the review of literature (Bryant & Charmaz, 2007). It should be noted that although Glaser and Strauss (1967) advised delaying review of literature until emergence of the core category, they acknowledged that when it is mandated by academic contingencies, the researcher must strive to be theoretically sensitive by holding all preconceptions at bay. Thus, prior to entering the field a literature review was conducted, during which potentially related issues and topics were identified. The focus of this review was to gain a better understanding of what theory and pedagogy exist with respect to how teachers support students to engage in SRL. Accessing the literature to provide further voice to the theoretical reconstruction was thought necessary (Bryant & Charmaz, 2007; Charmaz, 2014), to not only contribute to the research process but also to, most importantly, avoid reinventing the wheel.

It should be noted that the preliminary review of the literature revealed limited research into SRL as an event that happens in real time in authentic contemporary learning spaces, particularly research that examines how co-regulated learning leads to SRL or even how young writers acquire SRL. Although previous research has investigated how different instructional or social contexts influence how students engage in SRL (Perry et al., 2002), the interplay between social context and regulation has not necessarily been investigated. The major topics of literature that were identified relevant to this investigation are reported in chapter 2 of this paper. These topics include social cultural theory; various learning and development theories identified as relevant to understanding SRL; background literature to SRL, the use of formative assessment strategies and literature related to how young learners can be supported to become writers. In summary, this discussion established the view that SRL is essentially a social process and that
the co-regulatory nature of this social process is best facilitated when the need for learners to progress through various levels of regulatory control is recognised and supported, so SRL can be achieved.

**Ethical consideration and approval.** All researchers are morally bound to treat participants fairly, communicate to them honestly, accurately represent their meanings and only use information provided, as promised (Mears, 2012). The following practices were planned and implemented to achieve ethical standards associated with care ethicists (Duncan & Watson, 2010). Firstly, full and open disclosure of the purpose of the research was made to all participants in appropriate language so genuine choices could be made regarding participation. Only voluntary participants were included in the research and because children should be provided with opportunities for informed assent (Smith, 2011), voluntary consent was sought from them and their parents or carers. Pseudonyms and a disguised location were used to safeguard the participants’ identities. All personal data collected have been securely stored and will be retained up to five years and will only be made public behind the shield of anonymity (Christians, 2011). Finally, only those for whom the results were considered relevant were informed of research findings.

At the first interview, participants were encouraged to ask questions to ensure candour between themselves and the researcher, and when engaging with participants great care was taken to establish and maintain a sense of trust and respect (Mears, 2012; Nilson, 2011). To ensure this, participants were informed that they could end interviews at any time of choosing, not answer specific questions and were encouraged to raise issues that they thought possibly relevant (Mertens, 2010). Lastly, prior to beginning this research, ethics approval was provided by The University of Melbourne and Catholic Education Melbourne. Methodological decisions were at all times consistent with approved ethical practice.

**In the Field**

The logic of grounded theory informs and guides methods of data-gathering, not just theoretical development (Charmaz, 2014). Decisions are based on what methods best hold potential for advancing your emerging ideas, and are not restricted to one stage of the research process (Glaser, 1978, 2012a). In support of this logic, data collection and analysis were done concurrently throughout this study; nevertheless data collection methods will be next discussed...
and procedures for analysis will be discussed in chapter 4, 5 and 6 (where the analysis of findings is reported).

**Data collection.** Earlier, consideration of how the problem and the research question informed methodology was discussed and it was acknowledged that method choice should unmistakably be guided by the problem being investigated and its circumstances (Flyvbjerg, 2006). Consideration of what it means to operate from qualitative designed research was discussed and it was reported that a case study design was used along with a constructivist approach to grounded theory methods. It is acknowledged that both the quality and credibility of any study, depends upon the depth and scope of the data collected; it must be rich, substantiated and relevant to what is being studied (Charmaz, 2014). Discussion will now focus on data collection methods used in this study. These methods include a variety of interview techniques, microanalytic observation, general observation, videoed observation, and the analysis of samples of student writing. Discussion will focus on how each tool choice was deemed appropriate to the design of this study, how it was used, and the strengths and weaknesses associated with each tool. An overview of data collection tools and techniques used in this study is presented in Table 3.2. Each tool’s associated data type is included.

<table>
<thead>
<tr>
<th>Methods of data collecting</th>
<th>Data type</th>
<th>Frequency and duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Observation</td>
<td>Field notes/memos</td>
<td>Once in term 1 for 1 hour</td>
</tr>
<tr>
<td>Microanalytic observations (video recorded)</td>
<td>Microanalytic forms: data from transcription of video-recorded observations Field notes/memos</td>
<td>Once each of the 4 terms for approximately 45 minutes</td>
</tr>
<tr>
<td>Interviews</td>
<td>Transcription of audio taped interviews Field notes/memos</td>
<td>Once each of the 4 terms for approximately 30 minutes</td>
</tr>
<tr>
<td>Students’ written texts</td>
<td>Documents – text samples</td>
<td>One sample per student following each observation</td>
</tr>
</tbody>
</table>

**Observation.** Because many of the methods associated with the term observation are at the core of what qualitative research represents, choosing to base this study on observation was an obvious choice (Willis, 2007). A systematic and extended period of observations was designed to achieve explicitly rich information and to both challenge and strengthen findings
(Swanborn, 2010). Through these observations, new interpretive data was gained enabling the research question to become more complex (Stake, 2010). An initial observation was conducted involving the researcher as a complete observer so a sense of the human and social environment could be gained, along with participant activities and behaviours (Mertens, 2010). Four more spaced microanalytic observations followed (in each of the three learning spaces), in which the researcher was involved as an observer as participant. These observations were scheduled to provide sufficient time to capture each student participant’s capacity to SRL.

The general benefits of the observational research conducted in this study include that it positioned the researcher within the context of interest, enabling direct contact with the phenomenon under study. It required the researcher to collect data while participating with others in this data collection and enabled the researcher and participants to analyse data together (Willis, 2007). Multiple sources of data were collected during this study to strengthen the accuracy of interpretation. A disadvantage associated with overt observations is that the participants knew they were being watched so there was the risk of them altering their behaviour; nonetheless, the risk of this was reduced due to repeated observations that led to familiarity with the presence of the researcher.

**Observation using microanalytic technique.** According to DiBenedetto and Zimmerman (2013), microanalytic methodology was initially developed by Bandura (1986) to “assess the interrelation of thought and action using thought probes before, during and after efforts to learn, such as self-efficacy scales” (p. 32). Since then, Zimmerman and his colleagues have developed the methodology to include probes for self-regulatory processes such as strategy planning, strategy use and reflection (DiBenedetto & Zimmerman, 2013; Zimmerman & Schunk, 2011). Protocols associated with SRL microanalytic methodology, typically involves the researcher asking short, context-specific questions at a specific time (e.g. just before the student begins a task) with the intention of gaining information about the student’s self-regulated thoughts, feeling and behaviour (DiBenedetto & Zimmerman, 2013; Zimmerman, 2008). This technique enables the researcher/teacher to examine SRL as a dynamic process that is both task and context-specific (Hadwin et al., 2011), and to draw out information that otherwise would be non-discernable to a passive observer. In this study, SRL microanalytic observation methodology was applied to investigate the role of students’ motivational feelings, beliefs and actions, when
initiating and sustaining changes in their SRL, across the forethought, performance and self-reflection phases of learning (Cleary & Zimmerman, 2001; Kitsantas & Zimmerman, 2002).

In this study, observation forms and associated protocols were designed to record data collected during observations of students regulating the development of their writing. The uniqueness of the microanalytic method and use of the protocol lay with how observation and structured interview techniques were combined to provide a running record of what a student said regarding how they felt, what they were thinking as well as what they were observed doing and saying, all whilst working through the phases of a writing task. This approach involved concurrent engagement of both student and teacher participants during their scheduled writing time as the researcher closely observed, supervised videoing and wrote field notes. As the student worked through a writing task, the teacher engaged with them during regular classroom interactions whilst also following a simple protocol. The teachers asked questions just prior to beginning writing, briefly during writing and directly following writing. Protocol specified that the teacher ask the student the following four questions at each corresponding time:

- **Prior to beginning:** “Do you have a goal for your writing?” and “What do you need to do to achieve this goal?”
- **During writing:** “What strategy are you (did you) using to help you write?”
- **On completion of writing; prior to giving the student feedback:** “Point to the face that shows how you feel about how you performed during writing time” and “What did you do, that made you feel that way?”.

Following each observation session, the researcher observed the video and used the microanalytic observation form to record proceedings for the purpose of ongoing analysis and data collection (see Appendix B).

To capture change in development, microanalytic observation and questioning were conducted four times during this investigation (once each term, in each of the three learning spaces). Sessions were scheduled during terms one, two, three and four, totalling twelve microanalytic observations (across the study). The advantage of this technique was that it enabled the researcher to observe the teacher asking students strategic questions about how they were engaging in SRL. This was achieved by teachers asking brief questions directly prior to, during and after students were observed engaging in a well-defined writing task. The insights
gained were not reliant on retrospective or prospective reports and the evaluation of activity and processes was authentic. According to Cleary et al. (2012), SRL microanalytic protocols exhibit relatively strong reliability and validity. Similarly, Swanborn (2010) argues that collecting data from multiple methods when observing, provides triangulation by presenting an opportunity to compare subjective data with objective data. In this study, the opportunity to compare the analysis of data gained from observations included these three methods: data from general notes written during observations; data from the microanalytic observation forms (i.e. a record of how the students responded to the microanalytic protocol questions) and data from the analysis of writing samples.

It is further proposed that fine-grained microanalysis of students’ efforts with SRL provided valuable insight to what students were thinking, doing and feeling (Hadwin et al., 2011) and, furthermore, benefiting teachers by providing insight to their practice. These insights include how students benefited from forethought planning and how this interacts with how they then behave during the performance and reflection phases of the learning cycle.

**Interviews.** Information gained from interviews conducted throughout this study provided rich interpretative data (Stake, 2010). Preparation for interviews, including who were chosen for interviews, when, why and how they were interviewed, was informed by beliefs associated with constructivism and CGTM procedures. Two differing interviewing techniques were employed in this study, one informational and the other intensive. At the beginning of the study, reflective of CTGM procedures, informational interviews were conducted in an open-ended and participant-centred manner to gain understanding of the teachers’ thinking about how they could support their students to SRL. In addition, intensive interviews were conducted with the teacher participants each terms so further data could be used to develop theoretical categories. As described by Charmaz (2014), intensive interviews “reflected a mutual conversation about theoretical categories” (p. 19).

An informational interview was conducted initially to establish relationships with each teacher participant and to obtain information needed for the research. To prepare for these interviews, some questions were prepared and used to guide the gathering of information needed for the research (e.g. contextual, demographic and general perspectives relating to the focus of the study), these questions are presented in Appendix C. Consistent with CGTM practices, spill
questions were used initially to get participants to begin, and then relevant questions tended to emerge as the interviews proceeded thus providing more focus and detailed discussion (Charmaz, 2014; Glaser & Strauss, 1967). Audio recordings were made of informational interviews to ensure an accurate record of information could be made.

**Intensive interviewing.** Intensive interviewing was used throughout the study, and in alignment with CGTM procedures, interviews were conducted on a regular basis with emphasis given to eliciting the teacher participant’s perspectives, definitions of terms, situations, and events (Charmaz, 2014). Participants were encouraged to share their assumptions, implicit meanings, and their tacit rules (Charmaz, 2014). Intensive interviewing is a directed conversation that permits and an in-depth exploration of a particular issue, with a person who has had the relevant experiences (Charmaz, 2014). According to Charmaz (2014), both CGTM and intensive interviewing are open-ended and at times directed, shaped yet emergent, paced yet free flowing. In this study, questions evolved as the research progressed and were adjusted based on findings from previous interviews (Mertens, 2010). The researcher was open to following leads from the participant, thus probing questions were regularly employed to explore relevant issues (Mertens, 2010).

Intensive interviews were used to gain access to the pedagogical thinking underpinning effective practices observed. It was acknowledged that the researcher had points of interest to pursue whilst the teacher participants had problems to solve (Charmaz, 2014). Questioning was designed to invite detailed discussion on what the teachers were doing and why they were using specific strategies. These interviews were scheduled on the same day that microanalytic observations were conducted and videoed. Each of the three teachers was invited to participate in an intensive interview once a term so in total, twelve intensive interviews were scheduled across the school year (one interview per teacher, per school term).

Use of intensive interviews enabled the researcher to:

- analyse content collaboratively with teacher participants and go deeper than a descriptive investigation
- examine and explore in-depth, observed events relevant to emerging themes
- maintain relevant discussion and focus it towards deep analysis
- restate the participant’s point to check for accuracy (Charmaz, 2014)
• remain alert to interesting leads (Charmaz, 2014)
• learn nuances of the participants’ language and ways of expressing meaning, thus avoiding making assumptions (Charmaz, 2014)
• bridging experiences with the what is being investigated (Charmaz, 2014).

Although classified as intensive, these interviews were conducted in a conversational and free flowing manner so the participants were able to choose what to tell and how to tell it; had opportunities to reveal their expertness and could share what was significant to them. Focus questions were prepared to help the interviewer to interpret accurately, the ideas being expressed, or previously expressed by the participants. The intensive interviews were conducted on the same day as the observations and some of the discussion was focused on the samples of writing collected that day (or events observed to occur that day). This supported the participants to recall relevant events more accurately.

It is necessary to consider that when the source for interpretive data is interviews, there are always risks involved (Roulston, 2014). Research conducted by Roulston (2014) into interactional difficulties during interviewing, revealed the following possible issues:
• participants may decline to elaborate in response to questions, even when questions are not necessarily probing
• the interviewer may find it difficult to understand and orient to the participant in a manner that facilitates mutual understanding
• interviewers may be viewed as not cooperating with the researcher’s purposes
• participants may provide inaccurate, inconsistent and contradictory information
• information provided may be inarticulate accounts.

The findings from Roulston’s (2014) research suggest that to work through these problematic interactions the interviewer must look below the surface to what is in the topic that is causing the participants to use problematic interactions; for example, examining below the surface may reveal there are gaps in the interviewer’s questioning. During this investigation, the researcher was mindful of the need to reflect on the quality of interactions with participants and be ready to alter questions and approaches to interviews if required. It should be noted that on completion of research, this section was reviewed to consider whether any of these concerns surfaced during
interviews. This reflection revealed that opportunities to gain deeper insights from the teacher participants were possibly lost due to sometimes asking closed rather than open ended questions (e.g. *Was this goal relevant to the development of their writing?*).

**Assessment of writing samples.** So comparisons could be made between each student’s writing development and their ability to SRL, student writing samples were collected from the focus students (one sample per student, once per term across the four terms). A Year 1 Writing Analysis Tool researched by Mackenzie et al. (2015) was used to assess the samples of writing for growth. Each term, the analysis tool was used as a framework to evaluate how well the students used specific aspects of writing central to early writing development (see Appendix D). These aspects include the three authorial writing dimensions (text structure, sentence structure, vocabulary) and three secretarial writing dimensions (spelling, punctuation, and writing). The procedures used for any further analysis of the data obtained from this assessment of writing samples, will be discussed in chapters 4, 5 and 6.

**Development of Findings**

According to Charmaz (2014), the best method for describing what CGTM represents is through examination of how the researcher acts. Distinguishing features resides with how a researcher collects, codes and analyses data, and how outcomes are compiled through an iterative process of interpretive analysis (Charmaz, 2014; Jones & Alony, 2011; Lysaght, 2015). As stated by Charmaz (2014), “Some of our best ideas may occur to us late in the process and may lure us back to the field to gain an arresting view” (p. 18). Below in Figure 3.1, an overview of the data collection and analysis procedures conducted during this study is presented. The following section of this chapter further describes and explains each phase of methods and procedures used for data analysis and synthesis.
**Initial coding.** In preparation for initial analysis of data, transcripts were made of the informational interviews, first round of intensive interviews and dialogue from classroom observations. Initial coding commenced with an aim to define what was happening in the data so that in the next phase, categories could be studied, sorted and selected as focused codes (Charmaz, 2014; Urquhart, 2012). During this initial phase, construction of codes focused on naming what was either observed or interpreted from the data, then following reflection, codes were integrated into a more analytical level code (Charmaz, 2014; Urquhart, 2012). This reflection largely centred on shifting the focus from *what* happened to *why* it happened the way it happened (Urquhart, 2012). Simply stated, actions or exemplars of processes determined to
support students to engage in SRL were constructed as initial codes. This analytical reflection was guided by the following questions proposed by Charmaz (2014):

- What process(es) is at issue here? How can I define it?
- How does the process develop?
- How does the research participant(s) act while involved in the process?
- What does the research participant(s) profess to think and feel while involved in this process?
- What might his or her observed behaviour indicate?
- When, why and how does the process change?
- What are the consequences of the process? (p.127).

Data sought following proceeding cycles of interviews and observations, were also processed through this initial coding phase. By first coding the data using actions, these initial codes provided preliminary analytical direction for the interpretation of what was happening (Charmaz, 2014). Although analytical, these initial codes did not provide theoretical interpretation until they were categorised into theoretical codes. It was then, that the new insights emerged and understandings deepened (Urquhart, 2012), “making relationships between implicit processes and structures visible” (Charmaz, 2014, p. 133). Below, Table 3.3 displays a sample of initial codes and focused codes belonging to one of the core categories that emerged during this investigation.

**Table 3.3 Sample of Initial Coding of an Observation and then to a Focused Code**

<table>
<thead>
<tr>
<th>Core category: Socially-structured regulation of learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name for observation note</strong></td>
</tr>
<tr>
<td>Elaborating on what she wants the students to write in their plan by modelling language directly from the planner tool provided e.g. “A key word for what you see – you could put tree, green trees, you could put statue…”</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Directing students to ask questions of each other emotively so they gain an understanding of when to use exclamation marks in writing</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Source: Sharon, observation, term 2
Table 3.3 displays an example of how observation notes were constructed as initial codes because the actions were determined to be supportive of SRL. The focused codes assigned to these initial codes, and the title of the overriding core category are also displayed, demonstrating how these three levels of coding link. More detailed worked samples of data are presented in the result chapters (i.e. Chapters 4, 5 and 6). The following discussion describes the procedures used during focused coding and theoretical coding phases of analysis.

**Focused coding and categorisation.** During this stage, the researcher focused on the most frequently represented codes and/or significant codes amongst the initial codes, constantly comparing them to new and old data in search for both analytic strength and incomplete understandings (Charmaz, 2014). The meanings and relationships of the existing codes were examined using ideas suggested by Urquhart (2012):

- group selective codes together
- consider if one selective code is an attribute of another
- consider if a selective code, is in fact, a relationship
- consider if any of the open codes in a selective code are a better name for that selective code
- consider if the name you have given the selective code is truly representative (p. 89).

Those codes identified as strong were raised to a sub-category. Then theoretical sampling was employed by using focused questions during dialogue to clarify relationships between emerging categories and deepen understandings. Letting emerging questions guide the next steps in data collection and analysis is both encouraged and typical of grounded theory method (Charmaz, 2014; Corbin, 2009) and like the constant comparison approach this analytic technique was essential to each phase of analysis. Theoretical sampling was repeated following each round of interviews and analysis of transcripts. Clarification was also achieved through review of previous videos and memo writing, in search of missed insights and for opportunities to fill properties of categorised codes. As focused categories began to emerge, further theoretical sampling and constant comparisons were made to strengthen understandings. When no new
properties presented in the data and no further insights were apparent it was acknowledged that categories had become saturated and thus focused.

**Theoretical coding and conceptualisation.** The aim of this final stage of coding was to organise focused categories into a theoretical structure (Charmaz, 2014; Stern & Porr, 2011), leading to a theoretical interpretation of the conglomerate of data gathered (William, 2013). To achieve this, theoretical sampling was applied to deepen understanding of the links amongst the focused categories. Also, diagramming and memo sorting was conducted to formulate a logical representation of what was interpreted and to provide further insight to theory forming. Use of emergent theoretical codes at this stage, provided creativity to the analytical process (Charmaz, 2014; Lysaght, 2015). The most significant theoretical categories were then used to inform the concepts forming the substantive theory, along with the identification and the construction of the theoretical code that defined their relationship (Charmaz, 2014; Urquhart, 2012).

In summary, this final stage of analysis resulted in three core categories as well as a defining theoretical code. The results supporting these three core categories are reported in detail in Chapter 4 (core category 1: An intentional learning process), Chapter 5 (core category 2: Socially-structured learning) and Chapter 6 (core category 3: Metacognitive regulation of learning). The theoretical code defining the relationship between these categories is revealed in the discussion chapters (i.e. Chapters 7 and 8).

**Issues of Trustworthiness**

Claims have been made to the nature of qualitative research, that there can be no objective measures of validity so an alternative aim is to identify trustworthiness (Lincoln & Guba, 1985). A common set of criteria suggested by Lincoln and Guba (1985) for the purposes of establishing trustworthiness includes credibility, transferability, dependability and conformability. Similarly, Charmaz (2014) proposes the following criteria for grounded theory studies, credibility, originality, resonance and usefulness. Charmaz highlights that a combination of credibility and originality enhances the possibility of resonance and usefulness. In chapter 9, these four criteria of CGTM research are discussed to address how each criterion has been met by this study.

In seeking to establish trustworthiness, actions were taken during this study in the hope it would be interpretively rigorous. The goal was that the findings could be trusted to “point to action that can be taken on the part of research participants to benefit themselves or their particular
contexts” (Lincoln, Lynham, & Guba, 2011, p. 120). During this study, efforts were made to recognise and constrain bias during this study by considered design and triangulation (Stake, 2010). As discussed, multiple methods of data were used in this study which enabled findings to be triangulated, thus providing credibility by minimising the possibility of misinterpreting the data collected during the investigation (Stake, 2010).

According to Yin (2013), a theme associated with case study design that is too commonly neglected is the importance of identifying and considering rival expectations throughout the research process. Attending to these and knowing how to identify them is key to achieving findings of substance (Yin, 2013). By using a CGTM approach, the researcher in this study was the primary means of data analysis. To ensure that the interpretations being made were accurate, the two key methods of interpretive reflection applied during this study were constant comparison and theoretical sampling (Charmaz, 2014). According to Charmaz (2014), rich data provides solid material for building a significant analysis and obtaining rich data means collecting thick description. Teacher interviews were a major source of data during this study. The systematic coding process applied to this interview data (using a constant comparison approach), supported the conceptual development of the findings. In addition, theoretical sampling was implemented by supporting the explicit development of findings, with the aim of developing theoretical categories, and to clarify the relationship between these categories.

To establish a validity of inference, constant comparison and theoretical sampling methods were applied in the following manner. Following each round of interviews, transcripts were made of the recordings and then analysed by conducting initial coding (using a line-by-line technique). Focused codes were then formed by clustering the initial codes and constructing labels that represented incidents of how SRL was supported by the teacher participants. These codes were constantly compared to deepen conceptual understanding, and theoretical sampling was conducted to seek more data that was pertinent to developing potential categories. This sampling was achieved by designing interview questions that could further understanding and guide the formation of categories; thus, the analysis conducted using theoretical sampling as a method of reflection, provided strategic direction to questioning used during interviews. A further technique used to seek clarification, was paraphrasing of responses made by the participants and asking for confirmation.
To provide opportunities for the constant comparison of interview data, some interview questions were repeatedly asked of all three teachers, at all four interviews (see Appendix C). Similarly, during microanalytic observations, the teacher participants were provided a questioning protocol to use with their students when completing a writing task. This repetition of questioning provided opportunities for the direct comparison of data. In summary, the case study design used in this study, enabled multiple meanings to be expressed by the participants. By using CGTM in an iterative and systematic manner, meant their perspectives were continuously clarified and compared to make sure they were correctly understood and interpreted. This was done to ensure confirmation and validity so findings could be reported as substantive (Stake, 2010).

Chapter Summary

This chapter outlined the research methodology and design employed during this investigation. This included a rationale for choosing a qualitative research approach positioned in a constructivist research paradigm and discussion of the philosophical positioning of this research. This was followed by a discussion of the sample strategies used; the information needed for the study; the context in which this study was conducted and a description of each phase of the research strategy. This description included the preparations for the fieldwork, what took place in the field, and how the findings were developed. The chapter concluded with a discussion of surrounding issues of trustworthiness. Next, the analysis findings from this investigation are presented across chapters 4, 5 and 6.
Chapter 4: An Intentional Learning Process

The primary research question for this investigation was *How were Year 1 writers supported to engage in SRL?* Throughout chapters 4, 5 and 6, the subsidiary research questions that will be addressed through presentation of analysed data, include:

1. What practices and processes did teachers use to support Year 1 writers to engage in SRL?
2. Why did teachers use these practices and processes to support Year 1 writers to engage in SRL?
3. What strategies did Year 1 writers use to self-regulate their learning?
4. How did teachers change practices to support students with varied capacities to engage in SRL?
5. How did students with varied capacities to engage in SRL respond differently to supporting processes?

The codes and categories identified during this investigation were constructed following the analysis of data collected using CGTM. On four occasions during this investigation, three Year 1 teachers were observed supporting students with varied capacity to engage in SRL while learning to write. During these observations, the teachers were videoed as they asked three students questions about their metalearning strategy use (i.e. the setting of learning goals, strategy use and self-reflection upon performance). Following the observation sessions, each teacher participated in an intensive interview. To assist analysis, transcriptions were made of the video recordings and the interviews (see Appendix C for interview questions).

Following analysis, three core categories were identified when investigating how students were supported to engage in SRL. Firstly, it was identified that teachers shared learning intentions (LI) with Year 1 writers to *focus and clarify understanding*, then it was determined that they shared success criteria (SC) to *guide student self-assessment*. When combined, these two sets of practices were recognised as contributing to an *intentional learning process*. The analysis supporting this finding is presented throughout chapter 4. In chapter 5, the three subcategories forming the second core category titled *socially-structured regulation of learning* will be reported and the third core category titled *a metacognitive regulation of learning* will be reported in chapter
In the discussion presented in Chapters 7 and 8, the findings from these results are then linked to current theory and prior research.

How the findings from this investigation are presented across chapters 4, 5 and 6 is summarised below in Table 4.1. The titles of the three core categories identified during this investigation are listed in the first column. Each of these core categories represents a separate process deemed supportive to students when learning to engage in SRL. The sub-categories that form these core categories are listed in the second column and represent the various functions observed to be provided by each corresponding learning process. The third column lists the chapter in which the supporting findings are reported.

<table>
<thead>
<tr>
<th>Core categories</th>
<th>Sub-categories</th>
<th>Reported in Chapter…</th>
</tr>
</thead>
<tbody>
<tr>
<td>An intentional learning process</td>
<td>• focusing and clarifying student understanding</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>• guiding self-assessment and use of a feedback loop</td>
<td></td>
</tr>
<tr>
<td>Socially-structured regulation of learning</td>
<td>• systemising learning</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>• engaging students in peer-supported learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• scaffolding of learning</td>
<td></td>
</tr>
<tr>
<td>Metacognitive regulation of learning</td>
<td>• prompting of metalearning strategy use</td>
<td>6</td>
</tr>
</tbody>
</table>

In the first section of chapter 4, the teachers' broad notions of how they support SRL are presented. Then in the next two sections, the analysis is structured around the two sub-categories constituting the core category titled an intentional learning process. In the fourth section, the discussion focuses on how the teachers changed practices associated with an intentional learning process, in order to support students with varied capacities to SRL. How these students responded differently to each of the supporting processes associated with an intentional learning process is also considered.

**Teachers' Notions of How to Support Students to SRL**

The overall focus of this study was to better understand and describe how teachers supported their students to engage in SRL. In seeking to analyse findings associated with the core category titled an intentional learning process, it is necessary to first clarify the terms
Learning Intention (LI) and Success Criteria (SC) as both notions feature in forthcoming analysis. Hattie (2012) recommends that targeted learning involve two components: first, ‘being clear about what is to be learned from the lesson(s) (the LI); second, is having a way of knowing that the desired learning has been achieved (the SC)’ (p.52). These notions are evident in the following teacher interview transcript extract. When Adele was asked How can those strategies that you have just mentioned help the students to self-regulate their learning, and how in the long term does this promote their learning? she responded as follows.

I think if they have a fairly clear idea of what it means to be a successful writer or in this case a successful learner, that the students have been exposed to that and they can see that it works then it will just promote self-independence. Independent learners can go off if anyone comes along and says “What are you doing?” That they should be able to explain it. For me that’s the key. If I’m not there because I’m doing guided reading or writing or whatever and someone else comes into the area then they should be able to say what they are doing. Any student should be able to say what they are doing. This why I’m doing it. What is the goal, the aim, the learning intention. (Adele, teacher interview term 1)

Adele’s response in the above extract highlights her belief that for students to SRL, they need to have a clear intention for their learning and some criteria for success.

The discussion throughout chapters 4, 5 and 6 was structured, to present and interpret findings as well as to illustrate the analysis process used during this investigation. Directly following, some interview transcript extracts are presented and interpreted to explain the teachers’ notions of how students can be supported to SRL. Tables 4.2, 4.3 and 4.4 present coded data from the interviews conducted with each teacher participant. The transcript extracts and corresponding focused codes are presented to illustrate the coding procedures applied throughout this investigation. During terms one and four interviews, teachers were asked How can students be supported to SRL? The following analysis is focused on comparing these responses. Sharon’s coded responses are represented below in Table 4.2.

### Table 4.2 Coding of Sharon’s Explanation for How to Support SRL

<table>
<thead>
<tr>
<th>Extracts from interviews</th>
<th>Focused codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the student were writing a recount … put a focus on oral language so the students are confident in talking about what they are going to write down</td>
<td>Acquainting students with language</td>
</tr>
<tr>
<td>We are looking at the writing process … that’s going to be a guide for them</td>
<td>Systemising writing instruction with a process approach</td>
</tr>
<tr>
<td>We have talked about what a good listener is</td>
<td>Teaching listening skills</td>
</tr>
</tbody>
</table>
I provide prompts, oral language support or examples

[students] need to look at the chart to see the [success] criteria i.e. a good example of what their work needs to include

Prompting thinking and use of language
Self-monitoring using displayed SC
Scaffolding learning with visuals

*Extracts from term 1 interviews (continued)*

[students] asking questions during independent working time rather than having the teacher needing to encourage them to refocus on the task.
[students] seeing their achievements [is important].
It’s about using clear and concise instructions.
I'm using a lot of visual aids that support learning
I use a lot of praise … if I see a student using self-regulating choices … being specific about what they are doing so they'll be encouraged to do it again.

*Focused codes*

Encouraging students to seek help
Reflecting on learning
Focusing understanding
Scaffolding learning with visuals
Reinforcing use of SRL choices

Extracts from term 4 interview

I need to provide a rich introduction … and draw students in who might not be in the zone.

The students must have an understanding of what I am teaching … that they can independently show to me that have understood it.

The visual displays are very important i.e. the learning intentions and the success criteria.

These need to be introduced early in the lesson so they are clear from the beginning.

The role of questioning is also important. For me, questioning is about drawing the learning out of the students.
I'd like to see more development with rubrics for the purpose of self-evaluation…
[that students] ask themselves *Have I gone and checked the instructions from the board or have I read the success criteria displayed on the board?*

The role of questioning for the purpose of self-evaluating is important.

*Focused codes*

Engaging students with a rich introduction
Systemising instruction with structured lesson format
Focusing understanding
Demonstrating independent learning
Displaying LI and SC
Sharing LI and SC
Scaffolding learning with visuals
Focusing understanding by sharing LI/SC early in lesson
Systemising instruction with structured lesson format
Questioning orientates learning

Self-assessing with rubrics
Self-monitoring using displayed SC
Scaffolding learning with visuals
Questioning to support self-assessment

Source: Transcribed teacher interviews, Sharon terms 1 and 4

Sharon’s term one explanation includes some socially-structured learning practices (e.g. language instruction, teaching of listening skills, and scaffolding of learning). There is a mention of guiding the writing with a process approach and guiding self-assessment with displayed SC.

Her fourth term explanation articulates a learning cycle beginning with a rich introduction so an understanding of the LI/SC leads the learning that is then later clarified with displayed LI/SC that are further used when supporting students to self-assess. This shift in explanation, from a list to an inferred learning cycle indicates that in term four, Sharon’s conception of how students can be supported to SRL has evolved beyond implementing a mixture of generic instructional strategies.
Maree’s coded responses to the question *How can students be supported to SRL?* are represented below in Table 4.3. Like Sharon, her first term explanation includes references to a variety of socially-structured learning practices including sharing control of writing, the need to engage learners in talk to acquaint them with the language and scaffolding the learning with visuals. She also references linking reading and writing to assist understanding. Her term four explanation includes a reference to peer-supported learning and includes significantly more references to sharing LI/SC to clarify understanding.

**Table 4.3** Coding of Maree’s Explanation for How to Support SRL

<table>
<thead>
<tr>
<th>Extracts from interviews</th>
<th>Focused codes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Extracts from term 1 interview</strong></td>
<td><strong>Focused codes</strong></td>
</tr>
<tr>
<td>I have resources like alphabet resources, word cards, picture cards</td>
<td>Scaffolding with literacy aids</td>
</tr>
<tr>
<td>For those students who are only up to copying - I would say “You can go to this space over here and copy these sentences out”.</td>
<td>Recognising copying as a developmental phase</td>
</tr>
<tr>
<td>I’m doing modelled writing, shared writing or guided writing.</td>
<td>Sharing the regulatory control of writing</td>
</tr>
<tr>
<td>I’m trying to break it up.</td>
<td>Engaging learners in talk</td>
</tr>
<tr>
<td>I’m doing a lot of oral language before we write our message down</td>
<td>Acquainting students with language</td>
</tr>
<tr>
<td>I use picture cues ...to give a stimulus or an experience for example we had the trains out to try and provide stimulus</td>
<td>Scaffolding learning with visuals</td>
</tr>
<tr>
<td>I have them try and read. We would try to link the reading and writing.</td>
<td>Acquainting students with language</td>
</tr>
<tr>
<td><strong>Extracts from term 4 interview</strong></td>
<td><strong>Focused codes</strong></td>
</tr>
<tr>
<td>Having a LI and a SC are probably the most effective way to support SRL</td>
<td>Sharing LI/SC</td>
</tr>
<tr>
<td>They know what they have to do before they have to go back to their table. It is clear to them.</td>
<td>Focusing understanding with LI/SC</td>
</tr>
<tr>
<td>Probably teacher prompting is the main aim.</td>
<td>Prompting students with LI/SC</td>
</tr>
<tr>
<td>Sometimes stopping when you see someone doing something fantastic and getting them to share aloud, especially if it connects to the success criteria.</td>
<td>Sharing learning (that connects to SC) with peers</td>
</tr>
<tr>
<td>This especially effective if there are others around them who appear stuck. Sometimes this spurs them on or enables them to get an idea or a fresh strategy.</td>
<td>Sharing SC</td>
</tr>
<tr>
<td></td>
<td>Supporting peers who are stuck</td>
</tr>
<tr>
<td></td>
<td>Providing clarity and motivation</td>
</tr>
</tbody>
</table>

Source: Transcribed teacher interviews, Maree terms 1 and 4

Below in Table 4.4, only coding for the term one interview is represented due to Adele being unavailable for an interview in term four. The coding of Adele’s term one explanation reveals use of a genre approach to writing combined with a variety of socially-structured learning practices including scaffolding with graphic organisers, differentiating for varied capacity to SRL.
and modelling of writing. The sharing of SC so student learning is clarified and self-monitored is further evident in the focus codes presented in Table 4.4. Interestingly, Adele not only claimed she shares SC during the lesson introduction so students know what to do to be a successful learner, she also claimed that when observing students copying modelled text, she prompts them to remember the SC which can clarify a lack of understanding. This suggests the SC can be used to provide differentiated support so students can engage in SRL.

Table 4.4 Coding of Adele’s Explanation for How to Support SRL

<table>
<thead>
<tr>
<th>Extracts from interviews</th>
<th>Focused codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>We are presently completing a recount focus genre so we began with the reading of recounts and made connections to the text.</td>
<td>Systemising writing instruction with genre approach</td>
</tr>
<tr>
<td>Then we had a provocation so we went out to the school farm for a language experience</td>
<td>Acquainting students with language Engaging learners in talk</td>
</tr>
<tr>
<td>Then the next day I started with the writing process</td>
<td>Systemising writing with the process approach Modelling writing</td>
</tr>
<tr>
<td>I modelled how to write a plan.</td>
<td>Scaffolding learning with visuals</td>
</tr>
<tr>
<td>I then visited the Colourful Semantics which we are using as part of our grammar focus.</td>
<td>Scaffolding grammar</td>
</tr>
<tr>
<td>We looked at the headings that are along the planner</td>
<td>Scaffolding with graphic organiser</td>
</tr>
<tr>
<td>I also shared success criteria</td>
<td>Sharing SC</td>
</tr>
<tr>
<td>Some had just copied which suggests they didn’t fully understand…</td>
<td>Recognising copying as a need for intervention</td>
</tr>
<tr>
<td>…. so I brought them back together to have a little group with me and I asked them to remember the SC</td>
<td>Clarifying understanding with SC Differentiating support to students with varied capacity</td>
</tr>
<tr>
<td>If I’m very clear about what the SC is then they can do that …</td>
<td>Clarifying understanding with SC</td>
</tr>
<tr>
<td>… [I use SC] when bringing them back at the end or while I’m roaming</td>
<td>Reflecting on learning with SC Monitoring learning with SC</td>
</tr>
</tbody>
</table>

Source: Transcribed teacher interviews, Adele term 1

Comparing teachers’ notions of SRL. Implicit in the explanations presented above in Tables 4.2, 4.3 and 4.4, are notions commonly associated with the appropriation of SRL. The teacher explanations commonly reveal that the teachers shared LI and SC to focus and clarify student understanding. An implicit assumption supporting this practice is so that the regulatory control of learning can then be shared between themselves and the students. The interview
transcript extracts reported below present further teacher explanations, detailing why constructing clearly worded LI/SC can focus and clarify student learning to avoid confusion.

What are you doing? They should be able to explain it ... learning intentions give the children a clear focus … (Adele, teacher interview, term 1)

I gave the goal because it is a new genre of writing and I wanted to support them rather than them having to go fishing. (Maree, teacher interview, term 1)

The next explanation stresses the importance of writing SC to focus and clarify understanding.

If I’m very clear about what the success criteria is then they can do that [meaning what is stated in criteria] (Adele, teacher interview, term 1)

The above explanations indicate that the teachers share LI to support learners to focus and clarify understanding and provide SC so learners are clear about what they need to do to achieve success. The notion of supporting students to self-monitor or self-assess their learning so they are capable of self-evaluating their learning is also evident in the extracts presented in the above tables (see Sharon, p. 74) and are also featured significantly in SRL research (Zimmerman & Labuhn, 2012). Prompting students rather than telling them what to do is also implied and again is a recommended practice in support of SRL (Hattie, 2012). Encouraging students to share learning to support their peers was referred to and once again features highly in some areas of SRL research (Perry & Rahim, 2011; Perry et al., 2002). Throughout chapters 4, 5 and 6, each of these notions will be the focus of further analysis.

Next, the focus of analysis shifts to how the teacher explanations differed. The most obvious point of difference was Adele’s strong reference to sharing of LI/SC during her term one explanation whereas Sharon only made one reference to this and Maree made none. In contrast, all three teachers strongly referenced this practice in their fourth term interviews. This pattern is also evident in the analysis of how and when the teachers shared LI/SC. Observation data revealed that Sharon and Maree did not consistently share LI/SC during terms one and two but did in terms three and four. To interpret why the teachers did what they did and said what they said, it is necessary to refer to interview transcript extracts that detail descriptions provided by the teachers, of how team planning sessions are conducted. When Adele (the team leader) was asked Is there a structure to the way your lessons are planned, and if so, how is this planning done at your planning sessions? She stated

Yes, to some extent. We put all our ideas on the planner. For each activity or for each focus we put a down a learning intention and a success criteria and then there
are various questions to support that and the assessment component of that as well. Then some people tease it out differently but as long as we are aligned with diversity. That’s what our focus is here at [our school]. To make sure that the learning intention and success criteria are always up so that we can refer back to that … At the moment, it has been a challenge to get everyone on board with this practice, that is since new people came to the team. It’s good to have people question because it stops you being complacent but there has been a bit of reluctance. Some say they can’t write learning intentions, they can’t write success criteria. (Adele, teacher interview, term 2)

It is evident in this explanation that it is an expectation that LI and SC be pre-planned, then displayed, and referred to during lessons. It is also evident that some team members were experiencing challenges with this practice during the first half of the Year. Interestingly, Maree identified she was experiencing frustration with this practice during her interview that same day. Maree explained that she believed the planning process contributed to her confusion about how to write and use LI and SC. She explained that initially the team broke into two pairs and split the planning duties in half and because she was not always involved in the planning of literacy she found it difficult to then use the planner (interview extracts are presented below followed by follow up questions and responses).

*Earlier in the Year we had a two team approach but being new to this team I felt I was lost when using the planner. It didn’t make sense. It was very disconnected.* (Maree, teacher interview term 2)

**How are you using your success criteria differently than how you were earlier in the Year?**

*I suppose there is a whole lot more collaboration involved instead of just one person and you feel disconnected. You don’t have ownership of them. It does not hold meaning.* (Maree, teacher interview term 2)

**So now, how are you all having input into the writing of success criteria?**

*Now there’s a whole discussion and you can see how it connects. So you can use it. When I couldn’t see how it connected I was reluctant to use it.* (Maree, teacher interview, term 2)

It is evident that due to changes in the approach to planning, Maree gained a better understanding of how to use the LI/SC to support her students’ learning and therefore was better able to meet the expectations set by the school.

The expectation of sharing LI/SC with students became apparent early on in the investigation so it was necessary to ask why. Below is Adele’s response to the query: *As a
school, you appear to have chosen this as a common approach, why have you decided this?

What do you believe to be the benefits for doing this at the beginning of the lesson?

It’s really about tying it in to personalised learning – learning intentions and success criteria and then giving feedback… (Adele, teacher interview, term 2)

Also in this interview, Adele was asked: How does being team leader affect your role during planning?

Last week I had to send out a rather direct message that at [our school], every activity focus whether it is oral language, reading or writing, needs to have a learning intention and success criteria. This was because people were putting question marks instead of a learning intention. They were not sure from where they should get them. So we changed our planner format to try and accommodate new people but made it clear that that’s what we do here because it gives us a clear focus and also gives the children a clear focus. So anyone walking into the learning space should be able to say “David, what are you doing here?”. (Adele, teacher interview, term 2)

Catholic Education Melbourne promotes careful planning of what outcomes will be assessed and the development of the criteria to be used for assessment; combined with teacher feedback guiding student reflection and self-assessment. The analysis of the teachers’ understanding of SRL, a further interview extract from Adele’s term one interview is presented below because it suitably addresses the question of Why did teachers use these practices and processes to support Year 1 writers to SRL? When asked - How can those strategies that you have just taught help them to self-regulate their learning [using LI and SC], and how in the long term does this promote their learning? Adele responded saying

… what we are on about is a set of skills that they can transfer to any situation. The self-regulating should be in any area of the curriculum. So if they are clear about what success is, clear about what their learning intention is and then also overlaying that feedback component as well then I think that would really help. (Adele, teacher interview, term 1)

It is evident from Adele’s explanation that she believes students having a clear intent, knowing what they need to do to be successful in their learning and capable of articulating their intent, is what promotes independent learning and more importantly enables students to transfer their skills and understanding.

A further difference in how the teachers explained how they support students to engage in SRL became apparent when analysing the extracts presented earlier. It was identified that Maree and Adele responded differently to how they support students observed copying text modelled by the teacher. An analysis of Maree’s transcript (see Table 4.3) suggests she accepts
the copying as a strategy necessary for the development of their writing. Alternatively, Adele seemed to view it as an indicator that intervention is required so she prompted them to recall the SC to clarify their understanding (see Table 4.4). This finding revealed the possibility of using SC to provide differentiated learning.

**Focusing and Clarifying Student Understanding**

The following extract from transcribed observation notes, presents a snapshot of how Sharon focused the students’ writing task by sharing LI and SC with her class and illustrates how she clarified understanding by deconstructing a sample of text. The LI and SC are listed below in Figure 4.1 (an illustration of the whiteboard display from this lesson).

*Figure 4.1 Sharon’s Whiteboard Display on Narrative Writing*

This is our learning intention today – Every story has a problem and a solution. This is part of what we have been learning about narratives. The success criterion is I can use my imagination to write a solution that connects to the problem. I’m going to read to you now a little story as an example of a problem and a solution within a story and I’m going to ask you at the end what was the problem and what was the solution. This story is called Beanie and the Missing Bear (Sharon proceeds to read the story aloud). Sharon then asked, “Can anyone tell me what the problem was in the story?” Xena said “The bear was missing”. Sharon then repeated Xena’s response aloud as she recorded it on the whiteboard next to The problem. Sharon then said, “There were a lot of events in this story that led to the solution. What were some of the things that they did in the search for the bear? There were events that led to the solution”. Sharon then asked, “What were these events?” Students then took turns mentioning the events and Sharon responded by confirming their
suggestions. Then Sharon asked, “In one sentence, what would be the solution to the problem? If the bear was missing, what did the people in the story do to find the bear? One of the students replied by saying, “They searched”. Sharon then said, “We could say that part of the solution was searching for the bear”. Then Sharon wrote on the whiteboard - They searched for bear…Beanie and Clare found the bear (next to the heading - The solution). (Sharon, observation, term 3)

This description illustrates how Sharon positioned the sharing of LI and SC at the beginning of the lesson to focus and clarify the learning for the students. The other two teachers were also observed using this same approach when sharing LI and SC with their students. It can be assumed that their intent was to focus student attention on the targeted learning upfront as well as to provide clarity and focus for the learning (i.e. to write a solution that connects to the problem).

The following interview transcript extract, provides an explanation, explaining how Sharon shares LI and SC at the beginning of the lesson to focus the learning and to achieve clarity.

*The visual displays are very important i.e. the learning intentions and the success criteria. These need to be introduced early in the lesson so they are clear from the beginning.* (Sharon, teacher interview, term 4)

So far, evidence for why LI and SC are shared includes providing clarity, deepening understanding and providing a focus for learning. One further reason was mentioned by Adele who described using LI/SC to re-orient students who had lost their way or got distracted, which of course relates back to earlier discussion of orientating learning with LI/SC. The following interview transcript extracts illustrates how Adele described re-orienting student learning by clarifying with SC.

*I brought them back together with me and asked them to remember the SC…*

*I revisit the SC…getting them to say 'I need to think of an idea'. (Adele, teacher interview, term 1)*

**Constructing LI and SC to support student understanding.** The analysis of information gained during teacher interviews indicates assessment procedures conducted by teachers determined the focus of LI. The interview extracts presented below (including the perspectives of each teacher), indicate that moderation of writing samples during planning combined with a review of the curriculum informed the focus of LI constructed by the teachers.
Having those writing samples [referring to student writing samples brought planning] is very valuable for me to assess them against AUSVELS, to see how they are going not just for report writing but also for knowing what the next step is for each student. (Sharon, teacher interview, term 4)

We look at what genres and what structures we need to cover. We are beginning to make a scope and sequence, which is going to make this decision making easier. At the moment it is more about what we see happening in their writing for example that they may not be using adjectives. (Maree, teacher interview, term 4)

We have noticed that punctuation is poor so our LI was - When we have a draft we need to be mindful of using punctuation.... We decide diagnostically. We recently looked at writing samples.... I asked people to bring in three or four writing books and look at the writing and see what needs to be addressed in spelling. From that, we got the learning intention.... We did this so we weren’t just plucking the focus from just anywhere, instead they were from the work samples. (Adele, teacher interview, term 2)

The LI and SC observed being either used by teachers during lessons or seen displayed within their learning spaces are represented below in Table 4.5 where the LI are aligned with corresponding SC. The genre focus for each term is also listed.

<table>
<thead>
<tr>
<th>Table 4.5 LI and SC Observed Being Shared with Students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Term 1 – Persuasive writing</strong></td>
</tr>
<tr>
<td><strong>Learning Intentions</strong></td>
</tr>
<tr>
<td>The purpose of a persuasive text is to give appointment of view and to convince others</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>LI were not displayed or referred to</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Term 2 – Descriptive writing</strong></td>
</tr>
<tr>
<td><strong>Learning Intentions</strong></td>
</tr>
<tr>
<td>Good writers use a plan to write a draft.</td>
</tr>
<tr>
<td>Good writers use a plan to write a draft</td>
</tr>
<tr>
<td>LI were not displayed or referred to</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Term 3 – Narrative writing</strong></td>
</tr>
<tr>
<td><strong>Learning Intentions</strong></td>
</tr>
<tr>
<td>We understand that narratives have different parts</td>
</tr>
<tr>
<td>Narratives have a problem and a solution</td>
</tr>
</tbody>
</table>
The discussion that follows serves to describe the data presented in Table 4.5 and includes an explanation of why the teachers constructed LI the way they did during this investigation. Prior to this, it is necessary to provide some background information to support discussion. All three teacher participants were observed implementing a genre approach to teaching writing, and by doing so demonstrated their commitment to the teaching of concepts associated with genre theory (Derewianka, 1990; Martin & Rose, 2008). These concepts include the notion that key genres/types of writing have a specific purpose, structure and relevant language features. Similarly, the teachers were also observed regularly applying the process approach to writing (Flower & Hayes, 1981). This approach supports writers by dividing text composition into sub-processes (planning, draft and revising) that run both subsequently and recursively. The discussion of how LI were constructed includes terminology based on issues that Wiliam (2011) recommends be considered when developing LI and SC (as previously discussed in chapter 2). Wiliam recommends that there be a balance between:

1. Task-specific versus generic scoring rubrics
2. Product-focused versus process-focused criteria

An analysis of the LI listed in Table 4.5 suggests the teachers attempted a balance between specific criteria and generically focused criteria. The analysis that follows is based on the LI displayed and referred to by Sharon and Adele during the term 1 observation - *The purpose of a*
persuasive text is to give a point of view and to convince others. This LI specifically directs the learner in what to do (the task) whilst also identifying the generic purpose of a persuasive text (a specific genre type) and by doing so, qualifies as generic. It follows that anytime a learner is required to write persuasively, a learner can recall what to do – give a point of view and convince others. By focusing the construction of LI on aspects of genre theory (which was most commonly the case during this investigation and is evident above in Table 4.5), supports the assumption that teachers were teaching writing with conceptual intent. Similarly, observations during term 2 revealed that when implementing a process approach to writing, it was common practice to direct the focus to a phase within the writing process, therefore focusing the learning on the process of writing as opposed to the product. A more detailed discussion of how the teachers used genre theory and the process approach to systemise instruction follows in chapter five. To focus LI on where learning is being directed (i.e. genre theory or a process approach to writing) seems logical, as Wiliam (2011) states, ‘the best learning needs to be designed backward from the intended destination’ (p. 62).

It seems that by constructing LI with conceptual intent by using notions from genre theory, the students were afforded the opportunity to understand and make connections with their learning. The intention to create learning opportunities for students to make connections was made evident during an interview, when Adele stated:

It’s really about looking at concept-driven learning which I really relate to…I really believe in guided reading, guided writing and math sessions but I’m passionate about where does it flow in and make connections throughout all curriculum areas.

(Adele, teacher interview, term 1)

Although this is an implicit assumption, it is almost certainly the case that Adele made a connection between concept-based learning, making connections and transferring learning across curriculum. When Adele discussed her teaching background prior to beginning this investigation, she mentioned she had training and experience with the International Baccalaureate (IB) educational principles. IB programmes are recognised to be concept-based focused and as such are designed so students process factual knowledge through conceptual levels of thinking (Erickson, 2012). Adele also discussed her passion for inquiry-based learning. Bransford, Brown, and Cocking (2000) describe the essential components of inquiry learning as:
To develop competence in an area of inquiry, students must: a) have a deep foundation of factual knowledge, b) understand facts and ideas in the context of a conceptual framework, and c) organise knowledge in ways that facilitate retrieval and application (p. 16).

Conceptual-focused teaching is recognised for improving students’ capacity to remember. (Bransford et al., 2000; Erickson, 2012; Ritchhart & Perkins, 2008). By focusing the learning of writing with meaningful notions such as narratives have a problem and a solution reveals to the learner that regularities exist within text types, therefore providing meaningful schema for writing. Furthermore, sharing LI and SC focused on notions associated with a process approach to writing supports them to think rationally about the task of writing.

Sharing LI to support writing development. Next, the analysis of writing samples is presented to investigate whether the students’ samples showed growth in writing dimensions matching the focus of the LI shared. Because the focus of the LI shared with students predominantly focused on authorial dimensions, the aim was to determine if across the year, there had been stronger growth in the authorial writing dimensions (text structure, sentence structure, vocabulary) compared to secretarial writing dimensions (spelling, punctuation, handwriting). To provide for this comparison, writing samples were collected from each of the nine student participants once each per term (nine samples per term x four terms, thirty-six in total) and analysed using a tool developed by Mackenzie et al. (2015). This analysis tool is a rubric headed with six dimensions of writing (3 x authorial and 3 x secretarial) and was used to analyse what dimensions of writing were evident in the students’ writing and to what degree. This analysis tool is presented in Appendix D.

An analysis of Table 4.5 (previously presented), established that the teachers focused LI mainly on text structure and text purpose. It was therefore anticipated that the analysis of growth shown in writing samples (i.e. term 1 samples compared to term 4 samples) would reveal stronger growth in authorial dimensions of writing indicating LI can support learning by focusing and clarifying understanding of how to structure text and write purposeful sentences and text. However, the findings were not conclusive, for example, four of the nine students showed stronger growth in the authorial dimensions, two showed equal growth across both secretarial
and authorial dimensions and three showed stronger growth in the secretarial dimensions. These results are summarised below in Figure 4.2.

**Figure 4.2 A Comparison of Growth in Dimensions of Writing**

Source: Term 1 writing samples compared to Term 4 writing samples

An analysis of how each student progressed in each dimension revealed that two students showed growth in all six dimensions and the remaining seven students showed growth across five of the six dimensions. In summary, the findings show an overall growth in writing with four of nine students showing stronger growth in authorial dimensions.

**How sharing LI impacted students’ goal construction.** The analysis of data sourced from videoed, microanalytic observations and collected writing samples is presented to demonstrate how sharing LI with students influenced the students' personal goal choice and therefore the focus of their learning. As discussed in chapter 3, each term, video recordings were made of the nine student participants when working on a writing task - each teacher was asked to select three students with varied capacity to demonstrate personal and social capability (ACARA, 2013). During the video recorded observations, it was requested that the teachers ask three students (low, average and high capacity to demonstrate personal and social capability - *AusVELs*) the following questions, at each corresponding time:

*Prior to beginning:* “Do you have a goal for your writing?” and “What do you need to do to achieve this goal?”
During writing: “What strategy are you (did you) using to help you write?”

On completing of writing; Prior to giving the student feedback: “Point to the face that shows how you feel about how you performed during writing time” and “What made you feel that way?”.

Before elaborating on this analysis, it is necessary to establish how the students chose their personal goals. Following the interpretation of observation and interview data, it became apparent that there was a general expectation that during writing students should have in mind a personal learning goal. Nevertheless, it was not clear if there was also an expectation that personal goals have a similar focus as the set LI/SC so an attempt was made to clarify this during the third term interviews. Adele was not directly asked about this issue but in an earlier interview, she gave an explanation that indicated she interchanged the terms goal/LI seeing them as the same. She made no mention of supporting students with personal goal setting. When asked - What language would you use with the children? Do you use the term goal or learning intention? Adele said:

*We are using goal and learning intention for example their learning intention could be - I’m thinking of a reading one… ‘We will make connections to the text’… the success criteria would be ‘I can make connections to the text’. I would practice this orally and then model it and when they are starting to understand it. I would put that into an independent activity during which they can read a book I may have read or it can be a take home book. (Adele, teacher interview, term 1)*

When queried, Maree acknowledged the importance of students having a clear goal for learning and implied she would like the LI and student goals to be aligned (see below) but tends to let students chose their personal goals independently.

*As long as they have a clear idea about what they want to achieve, it’s ok, however ideally you want them to choose the learning intention because that’s the point of the lesson …They come up with those goals themselves. I’ve run with that a few times because I think they have a pretty clear idea of what they want to achieve today. (Maree, teacher interview term 3)*

In contrast, Sharon acknowledged that LI and SC are prepared at team planning but her students are supported to choose personal goals (which are planned once a term using a structured process). Thus Sharon provided a process to guide students to set their goals and Maree did not. Furthermore, the process Sharon provided possibly influenced her students’ goal choices, which seems evident by the goal choices summarised below in Table 4.6. This table lists the foci of the LI shared with students during each observation session and the foci of each student’s personal
goal. The shading used in this table represents one of two categories of writing dimensions discussed earlier – authorial (grey) and secretarial (black). The authorial coding is represented by two shades of grey: dark grey – if it connects to the LI and light grey if it did not connect to the focus of the LI.

When constructing this table it became very evident that all students except for one, managed to state their personal goal. One student failed to respond on one occasion and one student’s answer indicated some confusion. When conducting the analysis presented in Table 4.6 it became evident that Maree’s students consistently selected personal goals consistent with authorial dimensions of writing. Only one student on one occasion chose neat writing as a focus, which is categorised in the secretarial dimension. Adele’s students also mostly selected authorial goals with each of her students selecting a secretarial goal, on average just once across the year. In contrast, Sharon’s students showed no preference; instead they chose a mixture of authorial, secretarial and what could be described as behavioural-focused goals. An extended interpretation of these results follows below.

**Table 4.6 Microanalytic Observation Data: Personal Goals and LI Foci**

<table>
<thead>
<tr>
<th></th>
<th>Adele’s three students</th>
<th>Maree’s three students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foci of LI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Personal goal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>foci</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eve/High SRL</td>
<td>To write persuasively</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To use descriptive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>words</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To write a solution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not to rush handwriting</td>
<td></td>
</tr>
<tr>
<td>John/Med SRL</td>
<td>To write persuasively</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To leave spaces</td>
<td></td>
</tr>
<tr>
<td></td>
<td>between words</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To write a problem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and solution</td>
<td></td>
</tr>
<tr>
<td>David/Low SRL</td>
<td>ABSENT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To leave spaces</td>
<td></td>
</tr>
<tr>
<td></td>
<td>between words</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To write a problem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and solution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To write a procedural</td>
<td></td>
</tr>
<tr>
<td></td>
<td>text</td>
<td></td>
</tr>
<tr>
<td><strong>Foci of LI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Personal goal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>foci</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amy/High SRL</td>
<td>No Response</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To finish draft</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and revise writing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To write more than</td>
<td></td>
</tr>
<tr>
<td></td>
<td>two sentences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To write 5 steps with</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a verb at the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>beginning of each</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sentence</td>
<td></td>
</tr>
<tr>
<td>Robert/Med SRL</td>
<td>To convince people</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To finish my draft</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To join two sentences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To write neatly on</td>
<td></td>
</tr>
<tr>
<td></td>
<td>the lines</td>
<td></td>
</tr>
</tbody>
</table>
**Personal goal foci**

<table>
<thead>
<tr>
<th>Tony/Low SRL</th>
<th>That people think this is good (persuade)</th>
<th>To write more than two sentence (to finish draft)</th>
<th>To write describing words (seemed confused)</th>
<th>To have a verb at the beginning of each sentence</th>
</tr>
</thead>
</table>

**Sharon’s three students**

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
<th>Term 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foci of LI</strong></td>
<td><strong>Text purpose</strong> – To persuade</td>
<td><strong>A writing process approach</strong></td>
<td><strong>Conjunction use</strong></td>
</tr>
<tr>
<td><strong>Personal goal foci</strong></td>
<td><strong>Jeffrey/High SRL</strong></td>
<td><strong>To use finger spaces</strong></td>
<td><strong>To add more detail</strong></td>
</tr>
<tr>
<td><strong>Annie/Med SRL</strong></td>
<td><strong>To use neat writing</strong></td>
<td><strong>To use finger spacing</strong></td>
<td><strong>To put in extra effort</strong></td>
</tr>
<tr>
<td><strong>Xena/Low SRL</strong></td>
<td><strong>The cheetah has spots (confused)</strong></td>
<td><strong>To sound out words</strong></td>
<td><strong>To sound out words</strong></td>
</tr>
</tbody>
</table>

**dark grey shading:** Authorial/connected to LI  
**light grey shading:** Authorial/not connected to LI  
**black shading:** Secretarial  
**No shading:** Behavioural/not a relevant goal

To provide suitable explanations for the mixed selections from Sharon’s students, it is necessary that the goal selections of her three students be considered separately rather than collectively. The student identified to have high SRL capacity (Jeffrey) chose finger spacing (term 1), to add more detail to his writing (terms 2 and 3) and a behavioural goal (term 4). During observations conducted in terms 2 and 3 Jeffrey clearly demonstrated attempts to add more detail and once when asked by his teacher what could he do to improve his writing he said, “Add more detail”. It is believed that To add more detail slightly relates to the LI shared with his class during the term 2 lesson (i.e. to follow a process approach to writing). When implementing the process approach, teachers were observed encouraging students to revise and evaluate initial drafts so they could add detail. A possible explanation for his fourth term goal choice relates to the fact that Sharon implemented a process to support her students to construct personal goals (before the observed writing lesson during which the SC was shared). During this process, Sharon posted mostly behavioural-focused goals because she had recently identified that she needed to provide strategic behavioural support for her students. This is evident in the transcript extract from Sharon’s term 4 interview:

*I am still in the learning phase of being a teacher so the biggest challenge for my classroom is distractions. The students need to self-manage their impulsivity, it is behaviour related. I think the biggest challenge is the noise levels. Another challenge is to establish a respectful work environment. This is still developing … It is challenging at times due to all the different dynamics in the classroom. I feel that is the challenge.* (Sharon, teacher interview, term 4)
Also relevant was the fact that students had revised their goal choice earlier in the day of the observation and were very much on their mind. These behavioural goals were intended to be universal to all learning, not specific to writing. As stated by Sharon in an interview:

*Jeffrey’s goal: listening to the speaker and not sitting next to friends*

He wrote this goal earlier this morning, separate from the writing session and I believe he applied this goal to the introduction part of writing time… he has needed that as a goal but where he is at now he could possibly benefit from having a goal that is more specific, for example, to use verbs and adverbs in my writing … It is a relevant goal but not a relevant goal for his writing development. I can now see that I need to give him a goal that would take him to the next level. (Sharon, teacher interview, term 4)

It is evident in Sharon’s explanation that Jeffrey’s goal choice was most likely influenced by his class setting personal goals earlier that morning (independent of writing) and he would have benefited from a goal more specifically relevant to writing and one that would challenge him.

Goal choices made by Annie (medium SRL capacity) earlier in the Year (i.e. prior to Sharon supporting goal setting), included finger spacing and neat handwriting. Sharon explains these choices in the following interview extract as she reflects on Annie’s performance during writing that day:

*I’d like to have a conversation with her [i.e. Annie] around her goal to have her consider other areas. She has had a big focus this term on wanting to have good handwriting. This was through parent encouragement as well [i.e. in learning conversations]. The goal was actually finger spacing. I feel like she is going pretty well with her finger spacing … I’d like her to get back to sentence work and sentence structure. We did talk about that last time but I guess the kids share what most comes to mind. (Sharon, teacher interview, term 2)*

Sharon’s comments indicated the most obvious explanation for these choices is parental influence and previous feedback from Sharon herself. One aspect of Sharon’s personal goal setting process is that each term, students, parents and teachers participate in a *learning conversation* during which they talk about how learning is progressing and what they will next focus on in their learning. It is likely that Sharon’s reference to parental influence comes from such a conversation.

*We recently had a three-way conversation with their parents, myself and them - it’s a great starting point for them to share their work and to see evidence of them achieving this particular goal (Sharon, teacher interview, term 3)*
When Sharon identified good handwriting as a big focus she indicated that handwriting was previously the focus of targeted support and feedback (hence the need for finger spacing) and since, the focus of feedback has shifted to sentence structure but this advice was influenced by ‘what most comes to mind’. The above extract highlights not just the potential impact of parental and teacher influence on goal selection but also how monitoring and assessing performance and giving timely, explicit feedback to students is important for it to be taken forward by students. This is evident when Sharon acknowledges Annie needs a more challenging goal, one that is relevant to her developmental needs.

Xena, (identified with low SRL capacity) chose the same goal for three terms (sounding out words) and was rather confused when responding in term one. Interestingly, Xena was observed using the sounding out strategy with most words she wrote. An analysis of Xena’s spelling performance on samples shows very slow growth between terms 1 and 3 and a shift forward in term 4 which suggests spelling has been a consistent challenge. When observing Sharon interact with Xena (and other students), the most common feedback given was ‘I can see you have been sounding out your words, well done’. Keeping all these considerations in mind it is not surprising Xena continued to hold onto this goal because it must have seemed a priority need with teacher feedback reinforcing her thinking.

The above reflections and analysis highlight the following intervening factors as possible explanations for Sharon’s students choosing secretarial-focused and behavioural-focused goals over authorial-focused goals. The most obvious factor was Sharon scaffolding the goal setting process at the end of term three and prioritising behavioural-focused goals. Another factor is parents providing input during learning conversation that can influence the focus of future learning. The third factor is the combination of Sharon constantly focusing her feedback on spelling (which was evident during all four observations conducted in her learning space) and Xena possibly perceiving it to be her greatest challenge and learning priority. All three intervening factors appear as potential sources of feedback and guidance for students to use when setting personal learning goals that can be considered relevant.

The above analysis revealed whether the students’ personal goals matched the LI set by their teachers. The indications suggest that Adele and Maree’s students used independent choice to select personal goals and most of their choices matched the LI. In contrast, Sharon’s
students were supported by a process when selecting their personal goals. A process, that influenced students to choose largely behavioural-focused goals or secretarial-focused goals none of which matched the LI but remained somewhat relevant to their intended learning. This analysis indicates that sharing LI with students set the expectation for them that to set goals can focus and clarify understanding.

**Section summary.** In this first section of chapter 4, data associated with the sharing of LI/SC was presented to address how teachers constructed and shared SC to support students to focus their learning and clarify their understanding. Within this analysis it was detected that one teacher used SC to clarify learning for all her students at the beginning of the lesson as well as when recognising further clarification is required for those who are unsure what to write. An analysis revealed that LI were written with student-friendly language and focused on notions connected to a *genre approach* or the *process approach* to writing. The analysis of student data revealed all the students set themselves personal goals (regardless of their capacity to engage in SRL), and when personal goal selection was not influenced by teachers, they tended to choose goals that matched the focus of the LI set by their teachers. It seems this finding supports the assumption that sharing LI with students leads them to set goals that can *focus and clarify understanding*. Overall, these findings support the notion that constructing and sharing LI and SC to focus and clarify understanding, can support students to engage in SRL.

**Guiding Self-Assessment**

In this next chapter section, the analysis is focused on the subcategory *guiding self-assessment with SC*. Data are presented to explain how teachers constructed and shared success criteria with students to guide them to self-assess their learning, supporting them to SRL. The data is also presented to show if and how the teachers changed practices to support students to with varied capacity to engage in SRL. As discussed in chapter 2, Zimmerman’s SRL model represents the various dimensions of learning that students self-regulate as they progress through a cycle of learning. This includes goal setting, strategy planning, strategy use and self-reflection. A key property of SRL models is their cyclical nature and the need for feedback during ongoing efforts of learning (Zimmerman & Labuhn, 2012). How teacher participants used SC to guide their feedback to support students to self-assess their learning is the focus of this analysis; the discussion includes how these practices was observed to support students to SRL.
Constructing SC to guide self-assessment. For students to self-reflect on their learning, all require strategies to self-assess their performance against their previously set goals. Using SC is a possible strategy for having a way of knowing that the desired learning has been achieved (Hattie, 2012) and SC can be written to provide differentiated support to achieve this understanding. During observations, those SC seen being either used by teachers during lessons or seen displayed within their learning spaces are categorised below in Table 4.7. The organisation of this table is based on whether SC were perceived as either product-focused criteria (Wiliam, 2011) or designed to provide either differentiation or elaboration.

Listed below in Table 4.7, the product-focused SC seemed to be focused on the purpose of the writing task (I can identify and explain a problem), or on a phase of the writing process (In a draft we get our ideas into a sentence). Therefore, a closer examination of the product-focused SC indicates some are also process-focused because the product is part of a larger learning process (e.g. I can use a plan to write a draft). Constructing product-focused LI to support writing instruction is consistent with findings from a meta-analysis study investigating effective instructional practices for teaching writing to elementary grade students (Graham et al., 2012). This meta-analytic study provides evidence that supporting students with product-focused goals has a positive effect on writing quality. The SC designed to provide differentiation differ according to the level of cognitive processing required to perform the task (e.g. the ability to listen for the parts of the narrative comes before being able to identify them).

Table 4.7 Analysis of SC

<table>
<thead>
<tr>
<th>Category</th>
<th>Success Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product-focused:</strong></td>
<td></td>
</tr>
<tr>
<td>I can use adjectives to add detail to my writing (Sharon term 2)</td>
<td></td>
</tr>
<tr>
<td>I can use a plan to write a draft (Sharon term 2)</td>
<td></td>
</tr>
<tr>
<td>In a draft we get our ideas into a sentence (Maree term 2)</td>
<td></td>
</tr>
<tr>
<td>I can use my imagination to write a solution that connects to the problem (Sharon term 3)</td>
<td></td>
</tr>
<tr>
<td>I can change parts of a known text (Adele term 3)</td>
<td></td>
</tr>
<tr>
<td>I can make my problem and solution connect (Adele term 3)</td>
<td></td>
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<tr>
<td><strong>Differentiated:</strong></td>
<td></td>
</tr>
<tr>
<td>I can change the tone of my voice to convince others</td>
<td></td>
</tr>
<tr>
<td>I can use the correct words to convince others, (Adele term 1)</td>
<td></td>
</tr>
<tr>
<td>I can identify the different parts of a narrative</td>
<td></td>
</tr>
<tr>
<td>I can hear the different parts of a narrative (Adele term 3)</td>
<td></td>
</tr>
<tr>
<td>I can explain what an adverb is</td>
<td></td>
</tr>
<tr>
<td>I can give examples of adverbs (Sharon term 4)</td>
<td></td>
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<tr>
<td>I can identify a conjunction</td>
<td></td>
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<tr>
<td>I can add a conjunction to add two sentences. (Maree term 3)</td>
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</tbody>
</table>
I can write a title, I can list materials, I can write steps in order, I can write each step on a new line, I can use a verb (Maree term 4).
I can identify and explain a problem, I can identify and explain a solution, I can change parts of a known text, I can make my problem and solution connect (Adele term 3).

The following interview transcript extract confirms that varied forms of SC were sometimes provided as a differentiation strategy.

*We plan around LI and SC, sometimes the SC are designed for the more advanced students, the average and then the enabling just so they are all catered for. This is because sometimes the SC can be really quite high and it doesn’t meet the needs of those with lower ability. We try to plan for diversity….We usually have two or three SC, one for the higher achiever, one for average student and one is for the enabling student (Adele, teacher interview, term 2)*

Rather than using differentiated SC, Sharon was observed providing explicit instructions via steps for those students she determined required extra clarification (see Figure 4.3). The SC for the lesson were displayed but not referred to (I can use a plan to write a draft) as was the SC from previous lessons (*I can use adjectives to add detail to my writing*). Sharon reasoned she used the steps to simplify the learning intention:

*The steps on the whiteboard were very simple…they are different from the formal intentions, which I didn’t use … they provided clarity. I wanted to provide that for those that needed a simplified version of the steps because it was through the verbal explanations that a majority would understand along with the visual stimulus of the art work. (Sharon, Interview term 2)*

**Figure 4.3 Sharon’s Conversion of SC into Steps**

On different occasions during teacher interviews, Sharon referred to using the SC like checklists by making the criteria very detailed. This is evident in the following extract:

*Today for my writing task I made a very specific focus but depending on the type of task I’m doing for writing I will be more detailed with the success criteria. For*
example, I might word them as “I can…” statements, like a checklist on the board. Many times during the Year I put on another board – I can use adjectives in my writing, I can use a capital at the start of a sentence, I can put a full stop at the end of a sentence … in a box so they can look at it as a checklist. (Sharon, teacher interview, term 3).

The construction of elaborative criteria was also represented previously in Table 4.7 (I can write a title, I can list materials, I can write steps in order, I can write each step on a new line, I can use a verb) (Graham & Harris, 2005). The incremental list of SC breaks the challenge of writing a procedural text into simple steps that seem to provide suitable scaffolding of an otherwise complex writing task. Individually, each SC can be classified as a specific goal and/or task-focused goal, which according to research by Graham et al. (2012), has a positive impact on writing quality. The following extract is taken from observation notes of a lesson introduction conducted by Maree. A photo of the LI and process-focused SC displayed by Maree is presented as Figure 4.4.

Prior to sending the students to begin their writing, Maree drew their attention to the list of success criteria listed on a sheet (see Figure 4.2). She read each criteria emphasising them one at a time and then reminded students that each time they write a step they must write them on a new line and use a verb. Maree then showed them a graphic organiser they would be using to scaffold their procedural text and said their challenge today would be to write a title, a list of the things you need and a list of steps you need to perform. She pointed out that the graphic organiser will help them with this task. (Maree, observation, term 4)

Figure 4.4 Photo of Maree’s Displayed LI and Process-focused SC
Together, this photo (Figure 4.4) and the above extract from observational notes, demonstrate how process-focused SC were used in conjunction with a graphic organiser (designed to scaffold procedural writing), which technically can operate as one overarching process-focused criteria.

In summary, the above extracts and Table 4.7, show how teachers constructed and shared SC to guide students to self-assess their learning. It is evident that they used a variety of product-focused and elaborative criteria whilst also using further techniques to provide differentiated guidance with self-assessment.

**Guiding self-assessment with LI and SC.** The following interview transcript extract provides an explanation from Adele for how and why she uses LI and SC to support learners to self-assess their learning.

*Normally I would start the lesson with the focus by going back to the LI and then say, How will you be successful? What have you done? Let’s go back to the SC. It is personalised learning. It is about sharing LI and SC and then giving feedback. It allows that link to keep going. (Adele, teacher interview, term 2)*

It is apparent in Adele’s explanation that students’ thinking can be guided with ‘linking’ questions that together form a cycle of learning that is driven with feedback. This cycle appears to include sharing LI to focus the learning, sharing and questioning the criteria for success (*How will you be successful?*) so progress can be monitored (*What have you done? Let’s go back to the SC*), all whilst giving feedback. Also apparent but implicit in this extract is the expectation that the students share the responsibility for this self-assessment, by actively constructing their own learning cycle whilst receiving and processing the feedback provided to them. Transcribed observations of teachers giving feedback and the explanations they give for how they use feedback to support students to engage in self-assessment, is the focus of the analysis that follows.

Presented below is an extract sourced from transcriptions of videoed microanalytic observations. This extract describes how Sharon guided Xena to self-assess her writing by focusing her feedback on her writing goal.

*Sharon asked Xena if she achieved her goal and reminded her that her goal was sounding out words. Xena nodded her head and the teacher pointed out words in her writing in which Xena had represented the sounds well. (Sharon, observation, term 2)*
Following a review of evidence associated with the impact of feedback, Hattie and Timperley (2007) developed a conceptual analysis of feedback based on the discrepancy between the student’s present performance and what they are expected to perform. They propose using the following fundamental feedback questions when supporting students to close this gap: Where am I going? How am I going? Where to next? This model of feedback will be used to structure the following analysis.

The first of the three major feedback questions (Where am I going?) relates to setting goals for the lesson and communicating them to students. Sharon’s reflection on Jeffrey’s writing performance is illustrative of this practice (see below).

Jeffrey’s goal was to add more detail. We’ve had conversations prior to today about how he could improve his writing by using more adjectives. He was clear about his goal today and he took ownership over that goal when saying he wanted to add detail. (Sharon, teacher interview, term 1)

The second question, How am I going there? refers to providing feedback relating to their progress and/or the expected standard e.g. a reference to the criteria necessary for success. The interview extracts presented below shows how teachers used SC to guide students to consider How am I going there? with the intent that students engage in self-assessment.

We are trying to get that dialogue of What’s a success criteria e.g. What does success look like? How do I know what I’ve achieved? (Maree, teacher interview, term 1)

I think this is a strong piece of writing and I think he used strategies. I would have liked more time to pull apart the writing with him and ask him “Did you use a verb or an adverb?” [which was the focus of the SC/LI set for that lesson] (Sharon, teacher interview, term 4)

The following teacher interview transcript extracts are seen as further explanations for how they guided students to evaluate their learning using questioning feedback. These explanations are indicative of the reflective nature of the teachers’ thinking and the need for preparation so they can guide their students’ learning with contingent feedback or as Hattie (2012) says ‘just in time, just for me’ feedback, which is essential for a learner to move closer to the criteria for success. It provides evidence that the teachers were mindful that evaluating students’ performance was necessary for knowing how to extend their learning.

It’s about being clear about what questions you ask and why you’re asking that question and at what given time to ask that question. (Maree, teacher interview, term 1)
I am always evaluating what I need to say something about - or need to extend in the learning. For those students it is questions like: What strategy are you using? ... Do you understand the task? Is it clear? or Do you need to ask a question? Do I need to give you more information about what you need to do?... self-evaluating how they are going is valuable for me and for them (Sharon, teacher interview, term 4)

For me, questioning is about drawing the learning out of the students … The role of questioning for the purpose of self-evaluating is important. (Sharon, teacher interview, term 4)

Conferencing with students was a commonly observed practice during which questioning and feedback was provided contingently, to guide the students to reflect upon their performance. When Maree was asked if she had a magic wand, what conditions would she change to ensure her instructional support was more effective, she responded saying:

The time to correct work and look back and conference with students and be able to discuss what worked well and even better if. (Maree, teacher interview, term 4)

Her response highlights how much she values the time to provide personalised feedback directly following instruction. This desire is consistent with a key concern that Hattie (2011) stresses, that feedback be given directly after instruction and not 'in a vacuum'. Maree’s use of the term even better if relates to the all-important third feedback question Where to next? This third question, is something students need to consider in order to SRL. Nevertheless, it is important that they be guided to identify their next challenge themselves by considering Where to next? rather than being given the answer (Hattie, 2012). This is evident in a guiding feedback question given from Sharon to Jeffrey when he was attempting to write a persuasive text:

Jeffrey, are you going to tell me why a gorilla is the best animal by telling me all the reasons why? (Sharon, observation term 1)

Guiding students to engage in a feedback loop. With respect to the three question feedback model, it could be argued that the first question required to be asked is not Where am I going? but rather Where have I been? To ask students about what they have been learning prior to asking them to focus on Where am I going? or What are my goals? supports them to make important connections between previous learning and new learning (by engaging their own feedback loop), and in turn supports the transfer of skills to new learning contexts. Not all students are capable of ‘connecting the dots’ independently so benefit from being asked questions that explicitly guide them to do so. In Table 4.8, a coded transcription of one of Adele’s lesson introductions is presented to illustrate how students’ thinking was guided with questioning
prompts, guiding them to recall previous learning foci and engage in a feed-back loop. This analysis suggests Adele recognised all students (despite their capacity to SRL) benefit from being guided to connect their past and new learning.

**Table 4.8 Coding of Observed Lesson Introduction**

<table>
<thead>
<tr>
<th>Initial codes</th>
<th>Focused codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Intention: Good writers use a plan to write a draft (displayed)</td>
<td>Focusing students’ thinking on past writing activities</td>
</tr>
<tr>
<td>Genre focus : Descriptive writing</td>
<td>Prompting students to recall previous writing goals so they can make connections</td>
</tr>
<tr>
<td>1: Asking students what they have been doing in writing</td>
<td>Correcting with feedback questioning</td>
</tr>
<tr>
<td>2: Probing thinking with connected questions to prompt students to recall previous writing goals</td>
<td>Systemising writing instruction with genre approach</td>
</tr>
<tr>
<td>3: Correcting a student’s incorrect response by asking a series of probing questions <em>What have they been writing? Recounts? Persuasive? Descriptive?</em></td>
<td>Correcting with a feedback question</td>
</tr>
<tr>
<td>4: Correcting by asking <em>What was our focus for writing?</em> (When a student incorrectly answers)</td>
<td>Querying for elaboration</td>
</tr>
<tr>
<td>5: Querying the student’s response for elaboration (When the student said, “We have been focusing on how it makes us feel”)</td>
<td>Quizzing on use of process approach strategies</td>
</tr>
<tr>
<td>6: Quizzing them on what strategies they have used to help them write and prompting by pointing to the writing process display</td>
<td>Prompting recall of strategies with display</td>
</tr>
<tr>
<td>7: Displaying and explaining how to use the graphic organiser to write a first draft</td>
<td>Systemising writing instruction with a process approach</td>
</tr>
<tr>
<td>8: Directing the students about what to do by saying “Your task to day is to ….”</td>
<td>Explaining how to use scaffolding tool</td>
</tr>
<tr>
<td>9: Asking a series of questions about what and how to write a draft.</td>
<td>Scaffolding writing with graphic organiser</td>
</tr>
<tr>
<td>10: Asking students to explain how to use the plan to write a draft</td>
<td>Directing attention to task</td>
</tr>
<tr>
<td>11: Pointing to the graphic organiser to prompt an answer</td>
<td>Scaffolding students’ articulation of the task</td>
</tr>
<tr>
<td>12: Modelling how to write a wondering (part of graphic organiser)</td>
<td>Probing with questions to assist explanation</td>
</tr>
<tr>
<td>13: Highlighting the importance of writing a title and introduction that provides a sizzling start by modelling writing one</td>
<td>Asking for an explanation</td>
</tr>
<tr>
<td>14: Directing students to reread their writing to fix mistakes</td>
<td>Prompting by pointing to graphic organiser</td>
</tr>
<tr>
<td>15: Modelling editing strategy by asking a student to fix a deliberate errors</td>
<td>Scaffolding writing with graphic organiser</td>
</tr>
<tr>
<td>16: Clarifying focus of task by asking “What are you going to do today?”</td>
<td>Modelling</td>
</tr>
<tr>
<td></td>
<td>Emphasising the need to write a sizzling start</td>
</tr>
<tr>
<td></td>
<td>Scaffolding writing by using a catchy phrase</td>
</tr>
<tr>
<td></td>
<td>Modelling writing</td>
</tr>
<tr>
<td></td>
<td>Directing students to edit</td>
</tr>
<tr>
<td></td>
<td>Systemising writing instruction with a process approach</td>
</tr>
<tr>
<td></td>
<td>Engaging learners in peer modelling</td>
</tr>
<tr>
<td></td>
<td>Systemising writing instruction with a process approach</td>
</tr>
<tr>
<td></td>
<td>Clarifying focus of writing task by asking students to articulate what they are going to do next.</td>
</tr>
</tbody>
</table>

Source: transcribed observation notes of Adele’s lesson introduction, term 2

During this introduction, the students were asked a series of probing questions to prompt them to recall previous writing goals (*Where have I been?*) and when one student gave a misguided
response, Adele asked a further series of questions to guide their recall to the correct focus. This overview also illustrates how Adele prepared the students for learning (Where to next) by sharing the lesson focus via the displayed LI, referring to the wall display illustrating the process approach to writing (Plan, draft, revise) and by providing a graphic organiser (scaffolding descriptive writing). She proceeded to explain or ask them to explain how to use various scaffolding strategies (How am I going there?). She concluded the introduction by asking the students What are you going to do today? (Where to next?). By preparing all of her students in this manner, it can be argued that Adele has effectively scaffolded the forthcoming learning using the three feedback questions discussed above as well as assisting them to make connections with previous learning by guiding them to consider Where have I been? (Hattie, 2012; Hattie & Timperley, 2007).

Providing personalised feedback. Finding the time necessary to conference with students in order to provide personalised feedback was a concern expressed by Maree (reported in previous discussion) and Sharon. Presented below is an interview extract, where Sharon reveals her solution to this challenge. She supports the students to regulate their own self-assessment by teaching them to use self-editing strategies and that editing is one phase of the writing process, and expects them to use these strategies prior to and between opportunities to conference with her.

I roam to support them and I do a lot of one-on-one conferencing … I can’t always have one-on-one time with each child … I’m trying to extend students to become self-sufficient. I ask them do a number of things before they come to see me. They know they need to reread their work, do the editing and revising which simply could be underlining the words in red that they know they have spelt wrong. They’re taking a proactive approach … They are being active and hopefully self-regulating. They still come to me but I redirect them saying, “What could you do to improve this”. … These children are capable to do some editing independently. (Sharon, teacher interview, term 3)

When observing Sharon’s students during writing, their commitment to the self-editing process was quite evident, as was the support it provided to them when self-assessing their writing. During one such observation, Jeffrey finished his first draft much earlier than his peers and he was then observed independently underlining words he suspected he had not spelt correctly (one self-editing strategy taught by Sharon). When Sharon next walked near him whilst roaming and supervising the students’ progress, he held his writing up indicating he was ready for it to be conferenced. On reading his writing she prompted him to continue working on it. Later
Sharon stated when reflecting on his performance (teacher interview, term 3): *When directed he reread his work and added more detail. That is him self-regulating.* Sharon directed him to do so by asking: ‘*What could you do to improve this?’* Jeffrey then proceeded to add detail to each sentence in his first draft. Sharon’s feedback questions, combined with the self-editing process she had taught her students, evidently prompted Jeffrey to engage in learning behaviours associated with SRL. Although Jeffrey was identified by Sharon as having a high capacity to engage in SRL, her medium and low capacity students were also observed independently engaging in this self-editing process (including independently adding more detail to their writing).

**Supporting Students with Diverse Capacities to SRL**

It has been proposed in this chapter that practices associated with an intentional learning process supported students to engage in SRL. These practices include sharing LI and SC with students and providing feedback to engage students in self-assessment. This next section of discussion examines how the teachers changed how they implemented these practices in order to support students with varied capacity to engage in SRL, as well as how these students responded to supporting practices associated with an intentional learning process.

Data presented previously in this chapter (see Tables 4.5 and 4.7) revealed that the teachers tended not to differentiate the wording of the LI, but did elaborate and/or differentiate the wording of the SC for the purpose of clarity. In her term two interview, Adele acknowledged she approached differentiation by wording the SC so students ranging from those requiring extending to those requiring a high level of enabling could be universally catered for. This approach seemed an inclusive method because the focus of the learning remained the same for all the students. Altering the wording of SC so those students with varied capacity could interpret the SC ensured all had an understanding of how to achieve success. This was evident when observing Adele’s class in term 1. The LI was *the purpose of a persuasive text is to give a point of view and to convince others.* Adele universally differentiated the wording of the SC by providing student friendly SC that all the students could connect with: *I change the tone of my voice to convince others* (focusing attention to the use of punctuation e.g. exclamation marks) as well as *I can use the correct words to convince others* (focusing attention to the use of persuasive language).

It was thought that the differentiation of SC perhaps supported the students to make sense of the LI therefore assisting them to focus their learning using both the LI and SC. An
analysis reported earlier in this chapter (see Table 4.6), investigated how sharing LI supported students to construct goals. It revealed that despite their capacity to SRL, all students were capable of stating a goal for their writing. Furthermore, the students from Maree and Adele’s classes consistently stated goals with authorial dimensions of writing (reflecting a match with the LI). This analysis suggests that sharing LI/SC with students can support all students (despite their capacity to SRL) to set goals and therefore engage in an intentional learning process.

Another observed practice identified to engage the students in intentional learning was the clear expectation that all students must engage in self-assessment before approaching their teacher to conference their writing (Source: Sharon, observation, term 3). Despite their capacity to write or to engage in SRL, the students were expected to implement a self-editing process. Observations revealed that all seemed to engage in this process to some degree, largely because it was evident that the students had previously been instructed with what to do and were provided with strategies (e.g. using a red pencil to underline words thought not spelt correctly) and scaffolds (e.g. displays listing commonly used words, key vocabulary, or prompts on how to improve writing). Most students were seen independently attempting to self-correct spelling using word walls, asking peers or copying from peers. When prompted by Sharon, with the question “What can you do to improve your writing?” students were regularly seen attempting to add more detail to their writing (a previous learning intention). Interestingly, the quality of these edits were often reflective of the students’ writing capabilities. Nevertheless their intention to edit was consistently strong despite their varied capacities to SRL.

How the teachers changed how they implemented this editing practice in order to cater for students with varied capacity to SRL was evident when they were seen reinforcing the students’ attempts to self-edit, either during writing time or when conducting conference with the students. At these times the teachers were seen giving their students personalised feedback not just on their writing but on their attempts to self-edit their writing. Overall, these observations indicate that once again, all students if suitably supported can to some degree engage in SRL.

Chapter Summary

In the first section of chapter 4, the analysis of teacher understandings of how to support students to engage in SRL was revealed. The teachers believe that their students must have a clear intent for their learning (including being able to articulate this) and know what they need to
do to be successful in their learning. The analysis revealed that teachers support their students to engage in SRL by constructing LI with student-friendly language and with a focus on notions associated with a genre approach and/or the process approach to writing. The teachers claimed that sharing LI/SC at the beginning of the lesson was effective for focusing the learning and clarifying understanding. One teacher was observed sharing SC to clarify for some of her students how they could achieve success when they were seen copying modelled text rather than writing their own. The analysis of how sharing LI influenced student data revealed all the students set themselves personal goals (regardless of their capacity to SRL), and when personal goal selection was not influenced by teachers, they tended to choose goals that matched the focus of the LI set by their teachers. Together, these findings support the notion that sharing LI with students leads them to set goals that potentially focus their learning and clarify understanding.

In the second section, an analysis of how teachers constructed SC revealed teachers used product-focused criteria, differentiated criteria and elaborative criteria to ensure all students were capable of engaging in self-assessment. An analysis of teacher interview transcripts and observation data revealed that the students were expected to engage in self-assessment by actively constructing their own learning cycle whilst receiving and processing either general or personalised feedback. Evidence of this was presented by the analysis of a coded lesson introduction. It was revealed that teacher questioning reflective of the three feedback questions was used to prompt students to recall learning foci from previous lessons and that when using questioning feedback this way, perhaps the first question that needs to be asked is not Where am I going? but rather Where have I been? It was reasoned that this potentially guided the students to engage in using a feedback loop so they could make connections between old and new learning. The presentation of data revealed how teachers guided students to engage in self-assessment concluded with discussion of how one teacher supported her students to follow the process approach to writing including using editing strategies to improve their writing when having finished their draft.

The discussion in the final section of this chapter focused on how the teachers implemented practices associated with an Intentional learning process, to cater for the students with varied capacity to SRL. It was identified that the teachers were observed to differentiate the
wording of the SC. It is suggested this practice supported the students (despite their capacity to SRL) to process the LI and set goals for their writing. The discussion also focused on how students were supported to self-edit their writing in an attempt to engage them in self-assessment. Analysis indicated, that despite their varied capacities to write or SRL, they could engage in self-editing when supported by a simple supporting process consisting of editing strategies. Overall, these observations indicate that if students are suitably supported, they can to some degree engage intentional learning.
Chapter 5: Socially-Structured Learning Processes

The primary research question for this investigation was *How were Year 1 writers supported to engage in SRL?* How the findings from this investigation will be presented across chapters 4, 5 and 6 is summarised below in Table 5.1.

### Table 5.1 An Overview of How and Where Findings are Reported

<table>
<thead>
<tr>
<th>Core categories</th>
<th>Sub-categories</th>
<th>Reported in Chapter...</th>
</tr>
</thead>
<tbody>
<tr>
<td>An intentional learning process</td>
<td>• focusing and clarifying student understanding</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>• guiding self-assessment and use of a feedback loop</td>
<td></td>
</tr>
<tr>
<td>Socially-structured regulation of learning</td>
<td>• systemising learning</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>• engaging students in peer-supported learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• scaffolding of learning</td>
<td></td>
</tr>
<tr>
<td>Metacognitive regulation of learning</td>
<td>• prompting of metalearning strategy use</td>
<td>6</td>
</tr>
</tbody>
</table>

The discussion in chapter 5 serves to present the data associated with the three sub-categories that constitute the second core category titled *Socially-structured learning processes*. These sub-categories are titled, *systemising learning, engaging students in peer learning* and *scaffolding learning*. The first three major sections of this chapter will present the analysis supporting each of these sub-categories. Then the discussion in the fourth section will focus on how the teachers changed these practices associated with socially-structured learning, to support students with varied capacities to SRL. How these students responded differently to each of the supporting processes associated with socially-structured learning will also be considered.

Prior to beginning this discussion, the coded analysis of Adele’s term one lesson introduction is presented to illustrate how transcribed observation data were coded during this study (see below in Table 5.2). This sample of data shows how prominent focused codes emerged quite early in the CGTM analysis process. The initial and focused codes listed in this table illustrate how the coding process was applied during this study, and how focused codes laid the seeds for the notion of *Socially structured learning processes* (many focused codes that led to the notion *Socially-structured learning processes* are listed below in the right hand column of Table 5.2).
### Table 5.2 Coded Overview of Adele’s Term 1 Lesson Introduction

<table>
<thead>
<tr>
<th>Event/Initial codes</th>
<th>Focused codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Displaying a poster promoting Wunderbars</td>
<td>Displaying, modelled persuasive text</td>
</tr>
<tr>
<td>2: Prompting thinking with sequenced questions about the purpose of writing</td>
<td>Deepening understanding of purpose of writing</td>
</tr>
<tr>
<td>3: Directing attention to displayed success criteria (SC) and prompting them asking what they need to do to be successful at convincing</td>
<td>Guiding understanding with sequenced questioning</td>
</tr>
<tr>
<td>4: Probing thinking with a sequence of questions about SC to deepen understanding</td>
<td>Probing thinking with sequenced questioning</td>
</tr>
<tr>
<td>5: Confirming a student’s response</td>
<td>Confirming with feedback</td>
</tr>
<tr>
<td>6: Directing student attention to displayed success criteria (SC) by asking a student to read it – I can use correct words to convince others</td>
<td>Sharing displayed SC</td>
</tr>
<tr>
<td>7: Engaging learners in peer modelling by asking for words that convince others</td>
<td>Constructing genre-focused SC</td>
</tr>
<tr>
<td>8: Correcting a student’s misuse of terminology by directing attention to a chart displaying key words for each text-type</td>
<td>Engaging learners in peer-modelling</td>
</tr>
<tr>
<td>9: Directing students to read displayed key language with corresponding text-type</td>
<td>Systemising writing instruction with genre approach</td>
</tr>
<tr>
<td>10: Developing vocab by asking for a synonym</td>
<td>Correcting with modelling</td>
</tr>
<tr>
<td>11: Directing students to ask questions of each other emotively so they understand when to use an exclamation mark</td>
<td>Displaying key genre language,</td>
</tr>
<tr>
<td>12: Modelling use of exclamation orally</td>
<td>Systemising writing instruction with genre approach</td>
</tr>
<tr>
<td>13: Reviewing student reflections on sample poster (from previous lesson)</td>
<td>Displaying key genre language</td>
</tr>
<tr>
<td>14: Responding to students’ reflections (from previous lesson)</td>
<td>Directing students to read displays</td>
</tr>
<tr>
<td>15: Directing students to get a snack from their lunchbox</td>
<td>Systemising writing instruction with genre approach</td>
</tr>
<tr>
<td>16: Convincing students why her (i.e. teacher) snack is healthy</td>
<td>Modelling use of persuasive language</td>
</tr>
<tr>
<td>17: Modelling of persuasive language use by peers</td>
<td>Systemising writing instruction with genre approach</td>
</tr>
<tr>
<td>18: Engaging students in peer-evaluation (thumbs up or down)</td>
<td>Peer modelling of persuasive language use</td>
</tr>
<tr>
<td>19: Scaffolding writing via a graphic organiser structured like the poster</td>
<td>Systemising writing instruction with genre approach</td>
</tr>
<tr>
<td>20: Engaging student input during modelling of writing</td>
<td>Guiding self-reflection</td>
</tr>
<tr>
<td>21: Prompting students to use “all the positive reasons to convince people” on their own planners</td>
<td>Systemising writing instruction – a genre approach</td>
</tr>
<tr>
<td>22: Gauging understanding collectively (thumbs up or down)</td>
<td>Engaging learners in self-evaluation to monitor understanding</td>
</tr>
<tr>
<td>23: Engaging students in peer modelling of opening question</td>
<td>Engaging learners in peer modelling</td>
</tr>
<tr>
<td>24: Scaffolding writing with a sentence starter Are you tired of eating the same old…</td>
<td>Scaffolding writing with sentence starters</td>
</tr>
</tbody>
</table>

Source: transcribed observation notes of Adele’s lesson introduction, term 1
Systemising Learning

In this section, data are presented to explain how the teacher participants systemised instructional procedures so their students could benefit from transparent learning processes. It was reasoned that the teachers’ intent was to make the challenge of the learning more manageable, supporting the students to engage in SRL. There are two distinct pedagogical procedures evident above in the coded analysis of Adele’s term one lesson introduction (see Table 5.2). The first is the structuring of the lesson sequence by using modelled and shared writing approaches during the lesson introduction. In both instructional procedures she provided varied levels of regulatory support (Pearson & Gallagher, 1983). The second pedagogical procedure evident is a genre approach to writing. A third pedagogical procedure not evident in this specific extract but which was evident in other observed lesson introductions and apparent in transcribed teacher interviews, was the teachers’ use of the process approach to writing. It is argued here that the teachers used these three pedagogical procedures to systemise writing instruction so the learning process was transparent and manageable, supporting students engage in SRL.

During every one of the twelve observed writing sessions, the teachers structured the lessons with a sequence of three phases focused on: providing an introduction (with whole class); writing time (students supported in small groups or as an individual); and reflection time (with whole class). Lessons typically began with an explicit demonstration of writing by the teacher using a modelled and/or shared writing approach before organising for the students to engage in either independent writing or teacher guided writing. Then following the writing activity, the students were called together to share and reflect upon their learning (Pearson & Gallagher, 1983). This systematic structuring of the lesson was evident in all three learning spaces (showing a distinct release of regulatory control of the writing from teacher to student). The following interview transcript extract, presents an explanation provided by Sharon, explaining how important it is to provide a powerful introduction, so the students are prepared for learning.

*I know I need to provide a rich introduction and draw students in who might not be in the zone. I need to do a lot to have a successful lesson in terms of the students understanding what I am teaching and that they can independently show to me that have understood it.* (Sharon, teacher interview, term 4)
Then when asked ‘What questions do you think are important to ask students to gauge how well they are self-regulating their learning?’, Sharon stressed that she uses questioning in lesson introductions.

*I think it starts from the beginning of the lesson when they are drawing on what they already know and as they are recalling, I am evaluating what I need to say something about or need to extend … What strategy are you using? How are you feeling about your work? and asking Do you understand the task? Is it clear? Do you need to ask a question? Do I need to give you more information about what you need to do?* (Sharon, teacher interview, term 4)

Extracts of transcribed observation notes are presented below to show the beginning of lesson introductions conducted by Adele and then Maree. Both used questioning in lesson introductions to focus the students’ learning and engage their students in SRL.

*Adele began the session by asking the students “Who can tell me what we have been doing in writing? What has been our focus, our learning intention? What has been our goal? What have we been trying to do?”* (Adele, observation term 2)

*Yesterday we were talking about persuasive words and texts and we read this text about a favourite animal. Now we want children to persuade us with their favourite toy. Do you remember anything about that word persuade? Have a little think. Talk to the person next to you. What do you remember about the word persuade?* (Maree, observation term 1)

The transcribed interview extracts provided, along with observation notes (see above), show that the teachers thought it important that a lesson introduction be provided to set up, structure and focus the remainder of the lesson so learning processes were transparent and thus supportive of SRL. The writing phase of the lesson was further systemised by planning instructional procedures using a combination of a genre approach and the writing process approach to writing. Discussion of how and why teachers used these approaches follows.

In chapter 4 the analysis of how LI and SC were shared with students revealed a majority of the LI were genre-focused (refer to Table 4.5 in chapter 4). This practice reflects all three teachers’ commitment to implementing a genre approach to writing. This is evident in the following comments made during an interview conducted with Maree:

*I gave them the goal because I wanted the purpose, the why we are writing this way, to be the clear goal….I didn’t want the focus to be on sentence structure or handwriting. The focus was on ‘What does persuade mean?’* (Maree, teacher interview, term 1)

It is evident in this comment that Maree wants her students to focus on the distinct purpose of the writing task. Her second comment highlights she did not want students giving their sole focus to
secretarial dimensions of writing such as handwriting (Mackenzie et al., 2015) but rather on What does persuade mean? The use of the genre approach was consistent across all three learning spaces as the teachers focused on particular text types (e.g. term one – persuasive, term 2 – descriptive, term 3 – narrative, term 4 – procedural). This reflected a team approach to planning for instruction. The following interview transcript extract presents an explanation from Adele on how the genre focus was determined, having previously stated that this decision was always made during team planning. Adele’s response to the following question follows: Can you then please describe how during team planning you decide on the focus for writing?

For this particular instance, we looked at our inquiry and we looked at what would be a good match with the writing focus. We thought it would be descriptive report writing. We then talked about how we can scaffold it and what planner to use. (Adele, teacher interview term 2)

When Maree was asked to describe this process, she responded saying:

We look at what genres and what structures we need to cover. We are beginning to make a scope and sequence, which is going to make this decision making easier. At the moment it is more about what we see happening in their writing (Maree, teacher interview, term 4)

It is evident in the above extracts that the genre focus is commonly planned as a team and the process used to decide other foci was evolving towards a more structured and predetermined approach. The analysis of how a genre approach to writing was used to systemise instruction follows.

Represented below in Figure 5.1 is a photograph of Maree’s whiteboard display used during a lesson introduction on procedural writing. During the shared writing of this procedural text, Maree invited students to act out the steps required when making fairy bread while seeking student input with respect to the structure of the text and the language features associated with procedural writing. This is evidence that a language experience approach was being used in conjunction with a shared writing approach. As Maree prompted students to suggest the text structure (e.g. title, list of ingredients, steps involved to make fairy bread) she shared control of the writing by prompting them to provide the verbs required at the beginning of each step. Later, students were encouraged to refer to the whiteboard when writing their own drafts.
During this investigation, all three teachers were regularly observed conducting lesson introductions focused on engaging students in peer-talk and developing their knowledge about text types so they could develop a shared metalanguage, facilitating their understanding of text structures. The focus of the metalanguage included not just structural choices associated with each genre but also the language choices common to each genre. When Sharon was asked: When planning your lesson, did you strategically design it in any way to support students to self-regulate their learning?, she responded with the following explanation indicating she used modelling (by her and peers) to support students to develop their use of persuasive language.

Yesterday, in preparation for today’s writing lesson, I put a strong emphasis on orally providing an example to the students on how I could talk about my hat using a lot of persuasive language and then the children had a go. We touched on using specific words such as I strongly believe. Then the children provided examples of how they could be persuasive in the way they spoke. … Yesterday was the foundation for today’s lesson. (Sharon, teacher interview term 1)

A further example of how Sharon approached the teaching of language features associated with narrative writing is represented below in Figure 5.2. It presents information seen displayed in her learning space. It is both extensive and explicit in its representation of metalanguage associated with narrative writing. Sharon reported that this display would remain for the duration of the series of lessons focused on narrative text writing so both she and the students could reference it during
subsequent lessons. It is further evidence of how the teachers used a genre approach to teaching writing so the teaching and learning sequence was systemised.

Figure 5.2 A Photo of Sharon’s Whiteboard Display Language Features

![Image of whiteboard displaying language features]

Source: Sharon, lesson introduction observation term 3

Figure 5.3 Reading display on Genre Theory

![Image of reading display]

Source: Maree, observation term 4
During teacher interviews, references were made to linking reading and writing through the teaching of genre types. This practice meant that the basis for a writing lesson was set up during the reading lesson and similarly the learning from the writing lesson could be consolidated in a future reading lesson. Above in Figure 5.3, a wall display from Maree’s learning space shows a sample of a procedural text, a detail of the text structure, a list of instructional verbs (a language feature) and some learning reflections made by students. This display demonstrates how the foundations of genre theory were laid through reading, in preparation for writing.

As previously mentioned, all three teachers combined the process approach to writing with the use of a genre approach. Observations of writing lessons revealed many references to planning writing, writing a draft and revision of writing. Presented below is an extract of notes taken when observing a lesson introduction provided by Maree. It demonstrates how the teachers used the Writing Process to systemise the writing experience so students would naturally know how and when to revise their writing. This writing process is also presented below in Figure 5.4, which shows a display from Maree’s learning space and a photo of the whiteboard and writing sample used during the lesson introduction. This extract and the photos illustrate how the teachers supported the students to use strategies to assist them to work through a transparent writing process reflective of Self-Regulated Strategy Development (SRSD) model of instruction (Graham & Harris, 2005, 2013). These displays were observed during a writing session for which the LI was Good writers use a plan to write a draft and the SC was - In a draft we get our ideas into a sentence.

… Maree then drew students’ attention to a short draft sample (including deliberate errors) and modelled the importance of rereading work to see if it makes sense and how to make changes like fixing spelling, adding an ‘s’ to make a words plural and punctuation (a full stop). She also modelled how words can be replaced with better options. She told them that she could do it for them but then it would be me doing all the work and a student interrupts with “and all the learning”. Maree stresses to them that when writing a draft you can add ideas or make changes at any time. She also told them that they can seek help from a partner. Maree then directed the students to think what their goal might be for their writing, suggesting - to get your ideas into a draft. One student suggested, “My goal is to revise my writing”. (Maree, observation term 2)
During observations of lesson introductions, often the teachers were seen to implement a shared writing approach, which saw the teacher revising deliberate errors while encouraging students to share input by identifying errors, and suggesting corrections. An example of this is represented below in Figure 5.5, this shows a photo of a displayed writing sample composed by Adele during a lesson introduction. Her revisions were made using a red whiteboard marker (consistent with the expectation that students use a red pencil when revising their completed work). When demonstrating this writing, Adele was explicit with how to use information from the plan when writing a draft of a descriptive text (demonstrating all three phases of the writing process).
In summary, this section of chapter 5 has focused on how teachers systemised instructional procedures so students could benefit from a transparent learning process, supporting them to engage in SRL. The analysis initially focused on how the lesson sequence was structured around shared writing and consisted of an introduction (with whole class); writing time (students supported in small groups or as an individual); and reflection time (with whole class). It was evident by what teachers said and did, that lesson introductions were designed to structure and focus the remainder of the learning so the process was clear for the learners.

Further analysis revealed that the teachers systemised instructional procedures by implementing the genre approach and the process approach to writing by integrating strategies in support of independent writing thus reflective of a SRSD model of instruction (Graham & Harris, 2005, 2013).

**Engaging Students in Peer-Supported Learning**

In this section, interview transcript extracts are reported and interpreted to explain how the teachers engaged students in peer-talk, peer modelling, peer-evaluation and the seeking of peer-help so they could benefit from peer-supported learning. This discussion is structured around the focused codes, constructed during the analysis of data from transcribed interviews and microanalytic observations. The following interview transcript extracts are teacher...
explanations detailing why and how they engaged learners in peer-talk. The explanations from Maree suggested it is important that the students get to hear a new perspective (other than the teacher’s) and hearing the information in peer-like language is beneficial because it can assist understanding.

I think it is a priority because hearing my voice and my input all the time results in them tuning out. I probably repeat some things that some of them don’t need to hear again. So hearing a different voice or hearing a peer say I did it like this is really beneficial. (Maree, teacher interview term 3)

I wasn’t sure if they knew what the term persuade meant so I wanted them to hear from a peer. What does it mean? Is there another word I can use? (Maree, teacher interview term 1)

Maree also expressed the belief that having the opportunity to share ideas helps students to clarify their own thinking and that shyer students feel more comfortable initially discussing their ideas with a peer rather than sharing with the whole group.

Yes. A lot. A majority of these students are very quiet. There are a few big personalities that chat but a lot of them need a little person beside them to talk to first or even if it is just the opportunity to share an idea with another or hearing what others have to say and thinking “that’s a good response or idea”. It helps them to get an idea before they set off so I regularly get them to share. Then when they have had a little chat with a partner a lot more hands go up to share because they now seem to have something to contribute. (Maree, teacher interview term 3)

When Sharon was asked if the teachers promote peer-supported learning she indicated they provide time for the deliberate practice of peer talk, focused on what they have learnt so they can refine their ideas and because it is mutually beneficial.

We do try and develop it. Sometime is given to it … at the beginning of lessons and even during discussions we have peers talk to each other about what they have learnt. I see it drawing the information out of them, it’s their ideas and not me telling them. As well as this other children are hearing it … These times have to be interactive. Especially with my group, they learn from each other. (Sharon, teacher interview term 3)

When asked to explain how this practice supports student learning, Sharon identified the collaborative nature of peer-talk as a contributing factor to their school operating as a learning community.

We do a lot of knees to knees, eyes to eyes when they are sharing their ideas before going off to work. So that is a really good collaborative approach. More and more I’m trying to develop that in the classroom where a child will be able to share something that they know really well. That they are seeing themselves as a community that they can pass on knowledge as well as learn it and that will develop their understanding.
too. That is something that happens in the beginnings of the lesson but I hope will happen more and more further into the lesson. I have seen it. Students have made great choices to do that voluntarily as well. For them to be proactive and knowing that it is part of learning to share their knowledge and to reflect upon what they have learnt. (Sharon, teacher interview term 3)

At the beginning of the investigation when Maree was asked: *When and under what conditions do you think students are likely to engage in SRL?*, she listed engaging learners in peer-tutorage via peer modelling as a supporting condition, reasoning that sharing the responsibility of learning with a peer promotes motivation.

… *when there is a bit of peer-tutorage going on so peer modelling is happening at the tables. It is more likely to happen if they are with someone else.* (Maree, teacher interview term 1)

Then when reflecting on the observed lesson during her term 3 interview, Maree mentioned an incident when a student (Tony) was initially confused about what he was meant to focus his learning on but then was given clarity when a peer (Robert) stated the LI.

*Robert was perfect as peer support today. Tony said something about using describing words and I really wanted the focus to be on conjunctions so Robert articulated the learning intention, demonstrating he really knew what he had to do and so did Amy, but Tony didn’t seem to know what the focus was. So when Robert spoke the reiteration supported Tony to go “ohh yeah”. I can see what he is doing, and where he is going with his writing so I know how to get started.* (Maree, teacher interview term 3)

Interestingly, then during her term 4 interview, when again reflecting on the students’ performances, Maree described how Robert needed to be the beneficiary of peer modelling when unclear about the purpose of his writing. This illustrates how a peer’s role can swap from being the ‘regulating other’ to being the peer-learner and how the process of becoming a SRL is recursive. In the previous extract, Robert appeared to know to refer to the LI to find the focus of the writing lesson but during the term 4 observation, he appeared confused and according to Maree would have benefited from hearing his peers share their learning goals before being asked himself.

*When I asked Robert first about his goal and I shouldn’t have. He needed the prompt from the other two students to really talk about his writing. He is really motivated to write but he really understand why he is writing. He doesn’t really understand the purpose of his writing.* (Maree, teacher interview term 4)

Supporting students with processes that engage them in peer-assessment was mentioned by Adele during both terms one and two interviews. She proposed that getting
feedback from peers was a supplementary to just getting it from her and described how the ‘fist-to-five’ strategy (i.e. holding up a hand and showing a finger score) is used so students receive a concrete representation of feedback from peers and engages the students in assessment.

I do that fist-to-five. That helps because its visual and it’s easy for them. It also gives them some feedback from their peers. So they’re not just getting feedback from me all the time which can be a positive. Sometimes the kids will be a bit harsher than me. (Adele, teacher interview term 1)

Adele also mentioned how she incorporates peer-evaluation to support the revision of writing and self-evaluation.

So the big thing at the moment is punctuation ... So they must read their writing to a friend and then with the different coloured pencil they make changes. (Adele, teacher interview term 2)

During an interview, when discussing how to support students to SRL Adele proposed appointing a learning buddy to engage a confused student in peer help-seeking alluding to benefits such as modelling and the opportunity to share ideas.

I noticed a little boy hadn’t used it [supporting resource] and thought maybe setting him up with a buddy would help because when I’m doing my guided reading sessions this boy needs a check-in so if he’s not sure what to do, ... sharing his thought orally with a partner who I know is going to be a good model. (Adele, teacher interview term 1)

During her term three interview, Maree was asked if she engages her students in peer-tutoring aside from the times when sitting on the floor during lesson introductions. In response, Maree explained that she encourages her students to seek help from each other when clarity is required and that this avoids them approaching her. She was then asked to describe how she supports this practice and why she does it that way. It was evident from her explanation that the more talk the students are engaged in (relevant to their learning) the more opportunity they have to develop refine their ideas.

Yes, back at their tables I often say have a little chat with a partner or look at what the person next to you is doing or try and work it out together ... they have to work together to nut it out if there are any problems. They have to help each other. They are quite good at it because they are not at me all the time.

How do you set this up for them?

I prompted so it would happen and maybe it came from when we set up the rules and expectations from the start of the Year. ... I often say go and talk it through with
someone who doesn’t sit on your table. Go to someone different than who you are chatting with now.

Why do you do that?

Because probably in the learning time they have already heard the point of view of those around them and they’d benefit form hearing from someone different.
(Maree, teacher interview term 3)

During term three interviews, Sharon was asked if she ever sees her students seeking help from peers to which she proclaimed was a common practice, following which she and then was asked if it was encouraged.

… it is a nature that exists in our classroom …It is very much encouraged because they are learning off each other. It does happen without prompting when they are settled and working.
… I sometimes see the younger students going to the Year two students for words. More and more I am encouraging them to have a go and not be too worried if its wrong, but sometimes they will seek the knowledge of their older peers in the group. That’s not bad as long as that Year 2 student has a greater understanding of spelling and is not spending all their time helping others. (Sharon, teacher interview term 3)

In the above extract, Sharon expressed her concern that too much help seeking could be distracting for students and that the help was only effective if the student providing help had the necessary knowledge.

How students engaged in peer-supported learning. The analysis of transcribed video-recorded observations provided strong evidence that teachers regularly directed students to engage in peer-talk and peer modelling during the lesson introduction section of lessons. Presented in Table 5.3, are a list of early initial codes noting the occasions Maree was observed directing her students to engage in peer-talk during a lesson introduction.

Table 5.3 Students Engaging in Peer-talk and Peer Modelling

| Inviting students to share with a partner what they recall about the word persuade |
| Inviting the students to share with the class what they recall about the word persuade |
| Asking for student explanations, emphasising key ideas (relating to persuading) and using language to deepen understanding |
| Having three students model their arguments why their toy is the best |
| Having a fourth student model their arguments why their toy is the best |
| Asking students to state what key persuasive words a student used in their presentation |

Source: transcribed observation notes of Maree’s lesson introduction, term 1
The following two extracts taken from transcribed video-recorded observations, provide evidence that Sharon and Maree encouraged their students to engage in peer help seeking and giving.

*You can seek help from a partner if you need to (Maree, observation term 2)*

*I don’t mind if you share ideas and help each other* (Sharon, observation term 2).

Nevertheless, despite being encouraged directly before beginning writing, the students in Maree’s class were not observed either providing help or seeking help from each other. Similarly, Sharon’s students were observed to engage in help seeking and giving only on one occasion. This is not to say they did or did not, when they were not being observed. An extract of this episode is presented below.

*Xena asked “What’s the title” Annie said, “Statue. I don’t know. Yes statue”
Xena looked at the picture and said, “The title is the man with a bullet”. Annie said, “No it’s a ball”. Jeffrey then said, “Maybe we should just write statue”. “Xena said, “I’m going to write statue”. (Sharon, observation term 2)*

The analysis of all the transcribed video-recorded observations revealed this pattern was typical across all observations conducted in all three learning spaces. Therefore, despite teachers promoting this practice during their interviews and sometimes providing encouragement to their students to engage in help seeking and giving, there was very little evidence of it during classroom observations. It is possible the students were self-conscious due to them being video recorded thus preventing them from engaging in their regular self-help behaviours. Nevertheless, it is suggested that this finding illustrates the need for students to be more explicitly supported to engage in peer-support practices such as help seeking and giving.

**Scaffolding Learning**

In this next section, data are interpreted to explain how the teachers scaffolded learning to support their students to engage in SRL. This analysis begins with the teachers’ explanations of how and why they used graphic organisers to scaffold writing instruction. During the observations of students writing, it was evident that students were being supported to engage in SRL when their learning was scaffolded with *graphic organisers*. As stated by Maree:

*I think having a planning structure really helps the students to stay on task* (Maree, teacher interview term 2)
It was made evident during the teacher interviews that this occurrence was not random but rather was due the teachers strategically choosing a graphic organiser for a specific purpose. One criterion that was commonly mentioned during interviews was selecting organisers to support students with varied capacity to understand what they need to do to improve their writing.

*We consider the different graphic organisers that they could use. Some are easier to use and others require more detail, more information.* (Adele, teacher interview term 2)

*I chose this planner because it is simple with the pictures. For I see there is a picture of an eye, and an ear for I hear, hands for touch, and another for I imagined, it did really allow her to use her imagination and that was fantastic.* (Sharon, teacher interview term 2)

*The structure of the plan supported them with how to get the purpose down e.g. the little introduction, the position that they were begging with and then the reasoning that followed up was very supportive. I suppose you could say it gave them parameters.* (Maree, teacher interview term 1)

During one interview, Adele was asked to describe how scaffolding strategies were planned and if choosing graphic organisers was included in this planning. Her response indicated the teachers tended to choose graphic organisers from a selection of commercially produced ones and the choice was based on the developmental needs of their students. This selection was commonly made during planning as a team but then it was up to teachers to decide which student would best be supported by what organiser therefore aiming to provide differentiated support.

*Sometimes we decide between using a two star or a three star planner. I decided to use the two star because it was easier than the three star. The three star seemed to be a bit complicated and a bit wordy … The two star would be at standard and the three star might be above standard … We make decisions as a team and someone might bring one to the team that they have put together and we will decide if it will work or not. Then everyone can choose what might suit their children. We have various levels of planning scaffolds and graphic organisers too and we have some for the enabling and some for the advanced.* (Adele, teacher interview term 2)

An alternative method for the selection of a graphic organiser was mentioned by Adele during her term one interview. When discussing the organiser she gave to her students during term one observations, Adele said she designed it herself to support the students with their writing of a poster (a form of persuasive writing) because she thought a plain page alone would not be sufficient for them to use persuasive language and visuals. The extract of this explanation is presented below.
… one of the other junior teachers came to me last night and said “I think it would be really good if the kids write their own poster, which was different to what we had planned. So I said yes that’s great but he was just going to give them a plain sheet and I think it needs to scaffolded because the poster was a different way of presenting persuasive writing than just text. So I scaffolded it so it has the box for the opening question, it’s got three other boxes, one for the picture, one for the reasons and one in the centre that really grabs your attention, for example Rockmelon fruit! That is what she was trying to get the other children to eat. So by putting the scaffolding in, I think really supported the learning. I think that it would have been too hard, too difficult if it had been blank. I think she used the scaffolding, the graphic organiser really well. (Adele, teacher interview term 1)

Adele’s explanation clearly suggests her rationale for using this organiser was to enable her students to structure both the visual and verbal information so together they create a persuasive message. The above analysis establishes that the teachers used the same graphic organisers, having strategically planned this choice as a team, to support students with the planning of their writing. Furthermore, this indicates the teachers deliberately planned practices to support students with varied capacity to engage in SRL.

**Scaffolding learning with enabling prompts and displays.** Next, analysis is focused on how teachers used prompts and displays to enable learning. In chapter 4, the analysis focused on the sub-category titled guiding self-assessment revealed teachers gave feedback via prompting questions relating to SC to support students to self-assess their learning as well as prompts relating to LI so students could make connections between old and new learning. In the forthcoming analysis, it is revealed that the teachers also used the term prompt to refer to statements and/or questions used to redirect the focus of students thinking and attention or use of a strategy. The following interview transcript extract provides an explanation of what Adele means when using the term enabling prompts.

*Enabling prompts for me for example, is when we were doing the writing, there was one child who I knew was only capable of giving me a simple recount of the story, as compared to being able to write the problem and the solution. Once I had set the task, I took them aside … The enabling prompt was the question – “Can you tell me what happened in the story?”. (Adele, teacher interview term 3)*

When Maree was asked what she meant by her use of the term enabling prompts she said:

*It could be writing that is already on the board for example, modelled writing that they could copy or get stimulus from, or the handwriting chart or a word list. (Maree, teacher interview term 3)*
It is apparent that Maree views enabling prompts as a form of instructional modelling and therefore scaffolding.

In this next extract, Adele uses the term *prompting* to explain how she supported John’s writing by regularly giving him oral prompts to enable him to use the planner effectively to scaffold his writing. She also refers to a ‘prompt sheet’ (listing a selection of sentence starters). This extract indicates that Adele used both oral and visual prompts (i.e. displays) to enable learning.

> John needed more prompting than Eve. He was floundering a little. With prompting he realised it was a persuasive text but he needed a lot more guidance, a lot more prompting to get the reasons out. He didn’t know what to write for why people should eat the type of food he was writing about. I had to prompt to help him get that. I think John had ideas in mind but couldn’t get them out. … I do think that for him, it being a new graphic organiser, he needed a little bit of support. So I had to help him with structuring that question [the middle box] and putting the LCMs [a snack bar] for the food and also with the reasons, he gave me one “that they are delicious” but he needed a little bit more prompting to which he responded really well. Same with the prompts for the sentence beginnings. I saw him throughout the session looking at the prompt sheet. Whereas Eve just had a brief look at them and then did it her own way while John was very reliant on the sentence starters. (Adele, teacher interview term 1)

The aim of the lesson reviewed in the above extract was for the students to write persuasive texts. Adele used varied practices that were aligned to support the intended learning for example the graphic organiser was strategically designed to support persuasive writing; a prompt sheet listing sentence starters was displayed to support sentence structure so writing was persuasive in tone and Adele provided guiding oral prompts so John knew how to use these scaffolds effectively. When Sharon was asked how they plan enabling prompts she confirmed that discussion in team planning focused on how to scaffold the writing task so student learning was well supported.

> We talk together to decide. Sometimes we might decide something is not working because it might be a bit too hard so we decide to bring it back to a more basic level e.g. presenting them with a known text and getting them to identify the parts of the story. We will continue that approach till they gain in confidence and can make the confidence to complete the task. (Sharon, teacher interview term 3)

During an interview with Sharon, when she was reflecting on a writing lesson conducted earlier that day, she stated she wished she had remembered to direct the students to refer to displays when unsure of what to do (including the displayed SC). Sharon acknowledged that some knew to use this source of support without being prompted but that others needed her to talk about the displays during lesson introductions (emphasising their significance to the intended
learning) as well as prompting them to refer to displays when writing (e.g. when experiencing a learner’s block).

I did have the visual display up on the whiteboard which some of the children just naturally looked at. It had the sentence starters and key words for persuasive text but throughout the lesson I didn’t refer back to it for example I could have said, “If you get stuck you can come and look at the poster or walk up and have a look at our writing criteria which you need to remember when you are writing”. Ideally, I’d like to have those things placed more in the introduction so they know they’re things I can do before I go and see the teacher. (Sharon, teacher interview term 1)

During this investigation, a range of displays were witnessed when conducting observations. The focus of these displays included representations of the writing process approach, genre theory, spelling rules, spelling patterns, writing samples, deconstruction of writing, LI/SC, graphic organisers, learning reflections and language features associated with genres (e.g. a list of instructional verbs to use when writing procedural text). Below in Figure 5.6, a graphic organiser is strategically displayed beside the supporting LI and SC.

Figure 5.6 Photo of Sharon’s Wall Displays, Term 3

![Sharon's Wall Displays](image)

Source: Sharon, observation term 3

Three further examples of wall displays observed in Sharon’s learning space are in Figure 5.7. One shows a list of SC and the other shows visual prompts for students to use to self-evaluate their writing performance and the third lists spelling patterns.
In Figure 5.8, a photo display from Adele’s learning space shows how she deconstructed a story to scaffold the students’ understanding of how to structure narrative writing. It shows headings for each section of the narrative (title, setting, etc...) and then underneath, there is writing text from a previous lesson in which Adele has deconstructed a story that she has read to the class for example she listed the title and then the characters from the story. These displays remain for
students to refer to when required. Each photo demonstrates how learning can be enabled by displaying strategies that students can use to scaffold their understanding of writing for example how to structure or self-evaluate writing, achieve success or spell a word.

**Comparing the explicitness of scaffolded instruction.** The analysis that follows compares the extent to which each of the three teachers was observed to provide explicit modelling and support to students when using graphic organisers as planners and how this potentially effected opportunities to learn. The intention was to investigate the changed practices that teachers implemented to support students with varied capacity to engage in SRL.

Previous discussion has focused on how teachers used the writing process to scaffold the teaching of writing. Further analysis, reveals an inconsistency exists in how each of the three teachers supported their students to transfer ideas from their planner into their draft, during lessons in which the intended learning was focused on using a process for writing. The whiteboard display and the completed graphic organiser presented earlier in Figure 5.5, along with transcribed notes of a lesson observation (see below), show how Adele provided explicit modelling of how to complete the graphic organiser, and then how to translate the plan directly into a draft of descriptive writing. This extract illustrates many of the practices discussed so far in chapters 4 and 5. They include using modelled and shared writing to provide a powerful lesson introduction, sequencing prompting questions to orientate understanding, and the use of both the writing process and genre-focused graphic organisers to enable learning.

*While directing attention to a wall display outlining the writing process (plan – draft - revise) Adele asked the students about what they had been using to help them with their writing. When a student said, “The writing process” she asked, “Yes but what part of the process? What do we call this?” as she pointed to a planner/graphic organiser. A student then acknowledged they had been using a plan. Adele then asked what part of the writing process had they worked on the day before, a student said they had written a plan. She then asked them what parts made up the plan. Pointing to the organiser designed to support plan writing Adele asked a series of questions to guide them with how to use the planner. Adele then directed the students’ attention to the focus of the day’s writing session by saying, “Your task today is to finish your plan and then you will begin your draft. What does draft mean? What do you do when you write a draft? Where do we get our information for our draft? Do we use our plan?” A student says, “We use our plan.” “Do we go back and get our really rich words from here… or do we just throw that in the bin?” (Adele pointed to the planner). A student confirms that they get their words from the planner. Adele then models writing a wondering (the final section of the planner). She then modelled writing a first draft (see Figure 5.7). She mentions the importance of a title and an introduction providing a “sizzling start” so that the reader wants to continue reading. She tells the students it is important to reread what you have*
written so you can fix up mistakes. She invites a student to correct an error with her title (a failure to use a capital letter). Adele winds up the introduction by asking, “What are you going to do today?” A student said, “We have to finish our plan and then reread it.” (Adele, observation term 2)

During an observation of a lesson introduction conducted by Maree in term 2, a planner completed in the previous lesson was also seen displayed in Maree’s learning space. Below in Figure 5.9, a photo of the completed planner attached to a pinup board is presented as well as a photo of the whiteboard display used by Maree to model draft writing and editing.

Figure 5.9 Photo of Maree’s Completed Planner Sheet and Draft

Maree reminded students that the previous day they had learnt how to write a plan. She then directed them to talk to a partner about how to write a plan and then asked them what a plan looks like. A student said, “You write a plan by using words”, another said “You use a plan to get all your ideas down”, “That’s correct, you might put those ideas into words”. A student said, “You might plan by telling someone”. Maree responded with a sequence of prompts and then shared the SC, “It’s about getting your ideas down. But, what’s the next part? In a draft, what do you need to do? In your plan, you have all your ideas written down. The SC for today is...
we get our ideas into a sentence”. Maree then drew students’ attention to a short draft sample (including deliberate errors). (Maree, observation term 2)

The extract above and the photos presented in Figure 5.9 show many of the practices identified to be supportive to engaging student in SRL. In addition to those practices mentioned in the previous extract detailing Adele’s lesson introduction, Maree’s practices includes the sharing of SC and LI to orientate understanding. Nevertheless, what is evident in Maree’s lesson introduction is that not all of the practices she used were aligned and they were possibly not implemented explicitly enough to enable learning for all the students. For example, neither the SC that Maree shared orally (In a draft we get our ideas into a sentence) nor the LI she displayed on the whiteboard (Good writers use a plan to write a draft) match the focus of her modelled instruction (i.e. editing a draft). There was no direct connection drawn between the completed plan (displayed on the board) and the pre-written draft on the whiteboard. Instead, the purpose of the pre-written draft was used to model editing rather than drafting (the focus of the LI/SC). The drafting phase was skipped altogether. When the students were sent to their tables to use their completed plans to write their own draft, the expectation from Maree was that students would use revising strategies. Perhaps, what the students really needed direct support with was how to use their plans to write a draft. Interestingly, during observations of the writing phase of the lesson, both Robert and Tony (the medium and low SRL students) were observed occasionally looking at their plans but neither copied Maree’s spelling corrections into their draft or attempted to use sentences more complex than the ones in their plan. It seemed that this lack of alignment between the supporting processes and then intended learning prevented them from understanding what they needed to do to revise their writing and to engage in SRL.

The following observation transcript extract presents a description of how Sharon conducted the lesson introduction pertaining to planning and drafting writing. She reminded the students that they know how to write a plan but there is one aspect they still need to learn – to write key words and not whole sentences; she noted from the beginning of her introduction that this was necessary feedback. She then explicitly describes how to use the graphic organiser to support their planning. She stated, A draft is when you turn those key words into sentences thus connecting the purpose of the plan to the draft and making the connection clear before sharing a sample of a draft (presented in Figure 5.10). Sharon did this by saying, So I’m going to read you
a sample of a writing piece. It would have started from a plan. Unlike Maree, Sharon did not share LI/SC with her students but managed to make the learning intent clear by providing explicit directions (which were written as steps).

Figure 5.10 Photo of Sharon’s Pre-written Draft of Descriptive Writing

Source: Sharon, observation term 2

This extract shows how a graphic organiser was introduced to students to support their understanding of how to write a plan and how a plan is then used to support draft writing (the next phase of the writing process). It is evident that each supporting practice is aligned so potential learning is thus enabled. To provide a more explicit explanation of how ideas in a plan are then represented in the draft may have been possible if a completed plan had been referenced and displayed.

Sharon began the session by saying “By now you know how to make a plan but I’m going to give you something to do that you are not quite sure yet how to do yet. It’s a bit of feedback. When we are doing our plan today, I want to see key words on your plan. So on your plan, you can write key words about what you can see (teacher points to a picture on the Apple TV), what you hear, what you touch, what it makes you feel and what you wonder. A key word for see: you could put trees, green trees, you could put statue. I want you to come up with words you see. When looking at the picture I want you to think of what you can hear. Now when looking at the picture you don’t actually hear while looking at the picture but today you can imagine what you could hear. This is outside isn’t it (pointing to the picture)? Using your imagination, you might hear leaves rustling. You might hear people talking in the background or a car. Key words mean you don’t have to write a whole sentence. A draft is when you turn those key words into sentences. So I’m going to read you a sample of a writing piece. It would have started from a plan. This is about a painting. Very similar to
what we’re writing about.” Sharon then directs a student to read the sample aloud (listed in Figure 5.10). Next, she stresses saying, “Now remember, a plan is different to a draft” and then directed the students’ attention to a whiteboard on which she had written some steps. She read them aloud and further explained what they must do at each of the two steps.

Step 1: Look at the pictures and write key words on the plan.
Step 2: Start writing draft.

Sharon handed out the planner to the students and explained how to complete it. E.g. “You start with writing key words about what you see, then about what you hear”. She later said, “I don’t mind if you share ideas and help each other”. (Sharon, observation term 2)

The analysis provided above has focused on the extent to which the teachers provided explicit support to students when using graphic organisers as planners and how this potentially enabled opportunities to learn. It was evident that some of the supporting practices used by Maree did not align with the intended learning and links between each phase of the writing process were not made explicit. Observation of how this impacted the students to engage in SRL suggested those with medium and low capacity were unable to make sense of what they were meant to do to revise their writing.

**How scaffolded instruction enabled students’ writing performances.** The analysis that follows is focused on how using explicit graphic organisers (planners) in term two impacted the writing performances of Sharon’s three students as well as their on and off task behaviour. It was made by comparing their performance across writing dimensions by analysing writing samples collected in both terms one and two. These data was used along with the analysis of videoed recordings of the students completing the writing task. The video recording of this specific writing session was tracked in one minute segments, and it was noted which students were on or off-task and whether the teacher was engaging with this small group of students during that same minute. This data were selected because Sharon did not scaffold her students’ writing with a graphic organiser in term one but did in term two. A comparison of terms one and two video-recorded observations revealed that the students spent far more time on-task during term two (when the writing was scaffolded). This variation is evident in Table 5.4 in which the students’ off-task time is highlighted in dark grey shading and on-task time is represented by no shading.

The percentage totals of on-task behaviour show that in term one, Xena spent 63% of the writing time on-task, Annie 67% and Jeffrey 73%. In contrast, in term 2 (when the students’
writing was supported with a graphic organiser), Xena spent 79% of the writing time on-task, Annie spent 75% and Jeffrey (the high SRL student) spent 100% of the time on-task.

Table 5.4 A Comparison of On/Off Task Behaviour

<table>
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<th>Low SRL On/off task Xena</th>
<th>Med SRL On/off task Annie</th>
<th>High SRL On/off task Jeffrey</th>
<th>Sharon Present Yes/No</th>
<th>Low SRL On/off task Xena</th>
<th>Med SRL On/off task Annie</th>
<th>High SRL On/off task Jeffrey</th>
<th>Sharon Present Yes/No</th>
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<td>73%</td>
<td>53%</td>
<td>79%</td>
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</table>

Source: Video recorded observations, term 1 and term 2

N = student off-task   Y = student on-task
N = Sharon is not monitoring   Y = Sharon is monitoring

A comparison of Sharon’s students’ writing performances (from terms one and two) is presented below in Table 5.5. Writing samples collected in terms one and two were analysed
using the analysis tool developed by Mackenzie et al. (2015) to determine growth in the authorial writing dimensions (text structure, sentence structure, vocabulary) and secretarial writing dimensions (spelling, punctuation, handwriting). This tool is presented in Appendix D. In term 1, the LI focus was text purpose and the genre focus was persuasive writing. In term 2, the LI focus was on the writing process and the genre focus was descriptive writing. How Sharon shared the graphic organiser with her students during her term 2 lesson introduction was presented in the previous analysis. It was noted that Sharon was quite explicit when explaining how to use the graphic organiser to structure writing. The comparison represented in Table 5.5 reveals all three students either made gains or maintained the same standard demonstrated in term 1. Jeffrey made gains in five out of six dimensions, Annie made gains in four out of six and Xena made gains in three out of six dimensions. These results indicate all three students showed a very positive improvement in writing development as well as improved on-task time.

Table 5.5 Student Performances on Writing Dimensions

<table>
<thead>
<tr>
<th>Writing dimension</th>
<th>Jeffrey - High SRL</th>
<th>Annie - Med SRL</th>
<th>Xena - Low SRL</th>
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</thead>
<tbody>
<tr>
<td>Text structure</td>
<td>Term 1</td>
<td>Term 2</td>
<td>Term 1</td>
</tr>
<tr>
<td>Sentence structure &amp; grammatical features</td>
<td>4</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>4</td>
<td>5</td>
<td>3</td>
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<tr>
<td>Spelling</td>
<td>3</td>
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<td>2</td>
</tr>
<tr>
<td>Punctuation</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

It is suggested that the introduction of the graphic organiser along with Sharon’s explicit explanation of its role in the writing process possibly facilitated this growth in the students’ learning. Interestingly the level of improvement demonstrated by these three students reflects their identified levels of SRL. Jeffrey (high SRL) showed the greatest response to the introduction of the graphic organiser Annie (medium SRL) showed a medium response and Xena showed slightly less growth than Annie. Further evidence that Jeffrey’s learning was enabled by being provided a graphic organiser, became apparent when analysing the students’ personal goal choices. In both terms two and three, he chose to add more detail to my writing as his personal goal. The analysis of the video recordings of him writing and the analysis of his plan and writing samples show he did add more detail to his writing in term two (when provided with a graphic organiser to plan writing) but failed to do so in term 3 when not provided with a graphic organiser.
to plan his writing. During the term 2 teacher interview, Sharon confirmed Jeffrey’s successful attempt to add more description to his writing.

His plan does reflect some key words and descriptive adjectives like a metal statue. I think when he was writing his draft he was able to add even more detail. So he did his plan first and then on reading it, he has added more words to his draft writing. He wrote I touched the burning metal stature for which he is using his imagination. (Sharon, teacher interview term 2)

In summary, this analysis revealed that when Sharon introduced an explicit graphic organiser to all three students (despite their varied capacity to SRL), each responded by increasing on-task behaviour. However, with respect to improved writing performance, the high SRL capacity student (Jeffrey) showed greater improvement compared to the low and medium SRL capacity students (Annie and Xena).

Supporting Students with Diverse Capacities to SRL

It has been proposed in this chapter that socially-structured learning processes supported the students to engage in SRL. These processes include systemising the learning, engaging the students in peer-supported learning and scaffolding of learning. This next section of the discussion examines how the teachers changed the ways they implemented these processes and practices in order to support students with varied capacities to engage in SRL, as well as how the students responded to socially-structured learning processes.

As highlighted in the analysis presented throughout this chapter, each of the practices associated with the notion socially-structured learning processes, promotes opportunities for learning in which others share the regulatory control of the learning (e.g. teachers providing scaffolding or peers providing help). The very first analysis discussed in this chapter revealed that teachers systemised instructional procedures so their students could engage in a transparent learning process, potentially transforming the challenge of SRL into a manageable challenge. This was evident by the way the teachers structured the lesson sequence around instructional procedures that gradually released the regulatory control of writing from the teacher to the students (e.g. modelled, shared and independent writing); implemented evidenced-based pedagogy that provided explicit instruction (e.g. genre writing and a process approach to writing) and structured the lesson to support students to think and reflect (e.g. providing a powerful lesson introduction, time for independent writing and some time for reflection).
Although the systemised instructional procedures were implemented to provide universal support (i.e. provided to cater for all students) it was evident that some of the students required supplementary support in order to understand how to exploit these opportunities to learn. In a term one interview, Adele mentions that her medium SRL students still needs help to remember how and when to use supporting displays.

*I think he needs support to know he can go and find some key words if he might need to write persuasive text. He might even need to go and look at a model of a text that I've done which is on the board and he can go and have a quick read through that.* (Adele, teacher interview term 1)

This was apparent during the observations when students’ attempts to write indicated they needed further support. This was commonly provided by the teachers in the form of enabling prompts that were personalised to meet the developmental needs of each student. The students, with varied capacity to SRL, appeared to benefit from personalised support but as mentioned by both Sharon and Maree, this level of support was not always available so systemising the instruction, encouraging the students to engage in peer-support and providing scaffolding were more practical methods for providing differentiated support for students with varied capacities to SRL.

One analysis of the data revealed that the teachers promoted various practices associated with peer-supported learning as a means to assist students requiring further support to manage their learning. The teachers were observed implementing some of these practices in an intentional manner (e.g. peer-talk, peer modelling, peer-evaluation) nevertheless, when the students were not directed they rarely appeared to engage in help seeking or giving with their peers. Aside from asking for help with spelling or copying writing from each other, the students were rarely seen exploiting peer support in order to SRL. Further, it was evident that students with varied capacities could be supported when teachers aligned supporting practices so the learning focus was consistent and explicit and when this alignment was missing the low and medium capacity students were unsure of what to do.

A way that the teachers changed practices to support students with varied capacities was to select graphic organisers to match the learning needs of the students. As reported earlier, the teachers made these selections during planning to ensure all students were suitably scaffolded. However, each time observations were conducted and samples were collected, the students
were given the same organiser so writing performances could be compared. Analysis reported earlier provided evidence that the low, medium and high capacity students all showed growth when their teacher introduced a graphic organiser. On this occasion, all the students were given the same organiser but interestingly the high capacity students showed the greatest growth across writing dimensions. The graphic organiser was quite explicit and how to use it was explained in the introduction of the lesson so this difference in response from the high capacity student can possibly be explained simply by their greater capacity to SRL.

Comments from teachers during the interviews commonly inferred that the students with high SRL capacity could follow instructions by showing they knew what to do and did not require as much prompting as the medium and low SRL capacity students, whom they recognised needed regular prompting. This is evident in the extracts presented below.

*Amy [High SRL] is a very articulate child who often participates in discussions and likes sharing her thoughts, reflection and ideas. She follows instructions and knows what to do, and is very motivated to facilitate her own learning and is very keen to share that learning at sharing time or with her peers.* (Maree, teacher interview term 1)

*John [Medium SRL] needed more prompting than Eve [High SRL]. He was foundering a little. With prompting he realised it was a persuasive text but he needed a lot more guidance, a lot more prompting to get the reasons out. He didn’t know what to write for why people should eat the type of food he was writing about. I had to prompt to help him get that.* (Adele, teacher interview term 1)

When Sharon compares her three students with varied perceived capacities to SRL she does not mention prompting as something she needs to do to support Jeffrey (High SRL) and when describing the other two students prompting was specifically mentioned.

*Annie [Medium SRL] requires some prompting for staying on task but when she has a clear idea of what to do she is able to demonstrate what she has learnt … Xena [Low SRL] needs a lot of teacher prompting to stay on task. Even if it was as simple as getting her book out of her tub and coming to sit on the floor, I need to modify my instructions to simple directions.* (Sharon, teacher interview term 1)

These comments reflect observations made during this study. The students with high capacity to SRL seemed to use strategies more effectively (evident in video recordings) and more independently and appeared to sustain their writing for longer periods of time. This was evident in the data reported earlier in Table 5.5 which compared on-task behaviour from students with varied capacities to SRL.
Chapter Summary

In summary, the findings presented in this chapter indicate that the teachers believed systemised instructional procedures, scaffolded learning and attempts to engage the students in peer-supported learning could support their students to engage in SRL by making learning challenges more manageable. The first set of evidence included examples of how teachers systemised the instruction so students could benefit from a transparent learning process. Next, it was revealed that the teachers promoted various practices associated with peer-supported learning as a means to support students to manage their learning nevertheless, when the students were not supported, limited peer-supported learning was evident. Further analysis revealed that teachers scaffolded instruction to engage students in SRL. The explanations provided by the teachers indicated the planning team’s criteria for selecting the graphic organisers to scaffold instruction and provide differentiated support, indicating the teachers attempted to personalise practices to support students with varied capacity to engage in SRL.

An analysis of the observation data revealed that the explicitness of teaching provided to students differed largely and that this discrepancy was with respect to how the teachers aligned the supporting practices and processes with the intended learning. This lack of alignment appeared to impact the students’ ability to engage in SRL because the support provided was not necessarily transparent enough for the students to exploit. The analysis of data also revealed that the introduction of an explicit graphic organiser (an example of changing practices to support students with SRL) increased all three of Sharon’s students’ on-task behaviour (despite their having varied capacity to SRL) but had varied impact on their writing performances.

The discussion in the final section of this chapter focused on how the teachers implemented practices to cater for the students with varied capacity to SRL. Overall, it seemed that practices associated with socially-structured learning processes were designed by the teachers to universally support students to engage in SRL but because the students had varied capacities to SRL, sometimes personalised enabling prompts were required to supplement this support. Furthermore, those students with high capacity to SRL seemed more capable of exploiting the socially-structured learning processes provided to them.
Chapter 6: Metacognitive Regulation of Learning

It will be recalled here that in chapter 4, that the teachers supported their students to engage in SRL by sharing Learning Intentions (LI) and Success (SC) to focus learning and promote understanding. It was also revealed that the students could all state a learning goal and were supported to self-assess their learning by being given feedback focused on SC. In chapter 5, it was revealed that writing lessons were structured around practices designed to provide a transparent learning process so the challenge of engaging in SRL became manageable for the students. These practices included the following: implementing instructional procedures in which the regulatory control of writing was gradually released from the teacher to the students; structuring the lesson with a sequence including a powerful introduction, guided or independent writing time and time for reflection; as well as implementing supporting strategies such as evidenced-based writing pedagogy, instructional scaffolding and peer-supported learning.

It was evident in the findings reported in chapters 4 and 5, that the teachers expected their students to share the responsibility for their learning but a further and less obvious expectation was that the students attempt to engage in SRL by actively constructing their own metacognitive learning cycle. Central to the practices promoted by the teachers participating in this study, and consistent with the supporting literature, is the notion that learning to SRL is a cyclical process. The following propositions about how students learn to engage in SRL, extends this notion. Learning needs to be intentional (i.e. goal oriented); supported with contingently timed instructional scaffolding and personalised feedback (which needs to be gradually released to the student as the regulatory control of the writing is transferred to them) and lastly, learners need to reflect upon what they have learnt, how they learn, how well they performed and what they need to learn next.

In this chapter, evidence is reported to explain how the teachers supported their students to engage in SRL by using metalearning strategies formed around a metacognitive learning cycle (including setting learning goals, planning strategies, using strategies and reflection). In the literature, metalearning is interchanged with terms such as metacognition, reflection, self-directed learning and the phrase learning how to learn and refers to the ‘reflection and adaption of one’s learning methods and outcomes’ (Fadel et al., 2015, p. 167).
The discussion includes consideration of how teachers prompted their students to engage in metalearning strategy use and how the students responded. The analyses includes the degree to which teachers prompted students with question; if the goals and strategies that the students set themselves matched set SC and if their varied capacities to SRL impacted their choice of goal; and lastly, how students with varied capacities to SRL self-evaluated their writing performance. This includes consideration of if and how the teachers changed how they prompted students to use metalearning strategies to support students with varied capacities to SRL and the students’ response to such prompts.

**Prompting Metalearning Strategy Use**

An analysis reported in chapter 4, revealed that all the students set themselves personal goals, and that personal goal selection was either directly influenced by teacher-led goal setting processes, or the LI set by their teachers. Further analysis of data sourced throughout the investigation, indicated some of the students’ goal choices were not always developmentally appropriate. The two extracts presented below indicated that teachers Maree and Adele believed these specific students on this occasion chose a developmentally appropriate goal and used it to orientate their learning.

*Amy was very sure of herself when she started to write … She knew the purpose of the task she wanted to convince us why everyone needs a puppy like hers. I asked her what she does with her dog and she drew on some of that emotive language e.g. I cuddle it at night-time and it helps me sleep. (Maree, teacher interview term 1)*

*John’s personal goal is to put spaces between his words. So, when I asked him for his goal that was foremost in his mind. He eventually got to the idea that we are using a plan and the plan will help us to scaffold our ideas. At the end, he went back to his personal goal again. It is evident that he used it most of the time. It’s interesting though that as he progressed his spaces got less. I think he clearly achieved his goal; well he has begun to achieve it. (Adele, teacher interview term 2)*

In contrast, the interview extracts presented below were in response to the question of whether the students chose suitable goals. The teachers’ responses indicated that one student chose a goal that was not developmentally relevant and one was unable to articulate their goal independently.

*I think with the prompting John would have had a clearer idea of what a persuasive text is about i.e. that you do need to convince somebody. He found it a little difficult to articulate so I had to tease that out with him but I think that would help reinforce*
that this is a style of writing when you are writing persuasively i.e. to convince people you need to come up with reasons. (Adele, teacher interview term 1)

The goal Jeffrey chose was to use finger spaces and I feel that knowing what he can achieve, that was an easy goal for him. Something he could very easily achieve. I don’t think that throughout the lesson he was either thinking about or using finger spacing. Finger spacing as a strategy can be important but he doesn’t need to do it at his stage. That’s how I need to support him by helping him to choose other goals that could be more relevant to where he is at with his learning. For Jeffrey it might be for him to include three reasons why someone else might like a gorilla, to have three arguments in the piece. (Sharon, teacher interview term 1)

The combined analysis of observation data, writing samples and the teachers’ reflections during interviews indicated that when choosing goals independent of a supporting process, the students tended to choose goals relating to the LI/SC, and in some cases without a full understanding of the intent behind the LI. When students chose a goal not relating to the LI/SC, the students tended to hold onto a goal that they had already achieved and was no longer relevant to their development (this is evident in the analysis that follows). Furthermore, observations revealed that there were differences between how the teachers provided processes to support students to select appropriate goals. These differences were alluded to in chapter 4 are evident in the analysis that follows throughout this chapter.

How students’ goal focus and strategy use compared with SC. To enable the researcher to examine SRL as a dynamic process that is both task and context-specific (Hadwin et al., 2011), it was requested that the teachers ask their students short, probing questions focused on goal setting, self-regulatory processes such as strategy planning, strategy use and reflection, with the intention of gaining information about the student’s self-regulated thoughts, feelings and behaviour (DiBenedetto & Zimmerman, 2013; Zimmerman, 2008). This microanalytic observation data was sourced and interpreted to construct Table 6.1 (see table and table legend below), which summarises the results of the following analysis. In this analysis, the focus of the LI/SC set for writing lessons in terms 2 and 3 were compared with the focus of the students’ set goals, planned strategies and strategy use to investigate the possibility of an alignment between the two. Then observation data was then analysed to investigate if students achieved the success criteria. It was anticipated that a match would indicate that the sharing of LI and SC by teachers, supported students to set relevant goals for their learning as well as to plan for and use effective strategies.
<table>
<thead>
<tr>
<th>Table 6.1 Microanalytic Observation Data: Goal and Strategy Use</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>SC</strong></td>
</tr>
<tr>
<td><strong>High SRL – Eve</strong></td>
</tr>
<tr>
<td><strong>Med SRL – John</strong></td>
</tr>
<tr>
<td><strong>Low SRL – David</strong></td>
</tr>
<tr>
<td><strong>SC</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>High SRL – Amy</strong></td>
</tr>
<tr>
<td><strong>Med SRL – Robert</strong></td>
</tr>
<tr>
<td><strong>Low SRL – Tony</strong></td>
</tr>
</tbody>
</table>
To follow the writing process  
To write a solution that connects to the problem

| SC |  |  
|---|---|---|
| High SRL – Jeffrey | Goal: To add more detail to my writing  
Planned strategy: To add describing words to each sentence that I write | Goal: To add more detail to my writing  
Planned strategy: To use adjectives |
| | Strategy used | Strategy used |
| | Student said: not asked this question | Student said: I’m not sure |
| | Observation: He reread and added describing words to his draft. He referred to the plan when writing his draft. | Observation: He wrote steadily for the session but did not add detail to his draft and only used one adjective. His solution matched his problem. |

| Med SRL – Annie | Goal: To use finger spacing  
Planned strategy: To put a two finger space | Goal: To put in extra effort into my writing  
Planned strategy: I need to concentrate when I am writing |
| | Strategy used | Strategy used |
| | Student said: not asked this question | Student said: not asked this question |
| | Observation: She left spaces between each word but did not seem to need to use fingers. She finished her plan and referred to it when beginning to write her draft. | Observation: She applied herself better than in earlier observations and her solution matched her problem. |

| Low SRL – Xena | Goal: To sound out words  
Planned strategy: When I look at a hard word I sound it out | Goal: To sound out words  
Planned strategy: If I don’t know a word I can sound it out and they might be right |
| | Strategy used | Strategy used |
| | Student said: not asked this question | Student said: sounding out words |
| | Observation: Was observed sounding out words as she completed her plan. | Observation: Was observed sounding out words. Her solution matched her problem. |

**dark grey shading**: goal, strategy planned and/or strategy used, all matched the SC and observations indicate SC was achieved  
**light grey shading**: either goal or strategy matched SC and observations indicate SC was achieved  
**no shading**: personal goal and strategy did not match LI/SC but may have achieved SC

As evident in Table 6.1, in term two, five of the nine students (with varied capacity to SRL) managed to set goals, strategies and use strategies that matched the SC. Two other students set either goals or a strategy that matched the SC and the two remaining students chose goals and a strategy that did not match the SC and seemed no longer relevant to their learning needs. In term three, five of the nine students (again with varied capacity to SRL) chose either a goal or a strategy that matched the SC and the other four chose goals or strategies that did not match the SC however, their goals were somewhat relevant to their learning needs. It should be noted that three of these four students were supported to construct personalised goals prior to the lesson and the sharing of the SC.

It was evident in the observation data presented in Table 6.1 that all the students achieved the SC set for each observed lesson (term 2 – to follow the writing process, term 3 – to write a solution that connects to the problem or to join two sentences together). These findings suggest that regardless of student goal choice and strategy focus (of which there was a variety)
the students were capable of achieving the set SC to at least to some degree. This analysis also reveals that the students who chose goals or strategies unrelated to the SC tended to choose goals that were not either developmentally suitable or achieved. For example, in term two, both John and Annie chose finger spacing and leaving spaces as their goal but neither of them was observed using the finger spacing strategy and their writing samples show correct use of spacing. This suggests their goal was not developmentally appropriate.

In term 3, Jeffrey chose to add more detail to my writing and Tony chose to write as many describing words in a sentence as their goal. Their writing samples showed the use of one adjective and observations showed neither revised their draft to add more detail. This result indicated neither achieved their goal regardless of it being appropriate. Further analysis of the video recordings show neither of them were directed to add more detail. Interestingly though, as reported in chapter 5, in the previous term, Jeffrey selected this same goal and achieved it. That analysis indicated his success could be attributed to him using a graphic organiser to plan his writing prior to writing his draft (which was discussed during the lesson introduction) and the LI/SC for that term being focused on the editing phase of the writing process. This finding highlights the added benefit of aligning learning goals with the instructional strategies designed and implemented to support students to SRL, and that directing students to use the aligned strategies is also important. The teachers themselves acknowledged the need for prompting students to use suitable strategies (evident in transcripts presented later this chapter).

**Regulating goal setting, strategy planning and strategy use.** An analysis reported in chapter 4 revealed that two of the three teachers let their students select their goals independent of a structured routine. In contrast, Sharon mentioned a process that she implemented each term to support students with goal planning. She explained that to assist students with this planning, she displayed a variety of goal options for the students and asked them to select one that:

*would help them learn more and not something they could do easily, something they could work on for a number of weeks in order to master the skill… the learning goals happen in my group every term as the students come up with their own learning goal.* (Sharon, teacher interview, term 3)

When asked to describe the process, Sharon responded saying:

*We gave them exposure to a variety of different goals. When displayed, the students were asked to find a goal that would help them learn more and not something they could do easily, but something they could work on for a number of weeks in order to master the skill. For example, [Sharon read prompts from a student’s learning goal*
plan – displayed below as Figure 6.1] – My learning goal is…one student wrote to sound out hard words. I can achieve my goal by doing my goal – sounding out the words when doing my reading and writing. This student marked herself at practicing level. Then at the end of the term, this student will reassess herself to see if she has achieved her goal or when we come to a closure with this goal. The goal can continue as an existing goal if necessary. She will mark how she feels how she has developed. That is a self-assessment. They also have an opportunity to share this within a three-way conversation with their parents, and myself. It is a really lovely way of revisiting the goal. (Sharon, teacher interview term 3)

In this transcript, Sharon referred to Xena’s goal sheet, which is designed to scaffold the planning of goal setting and use (see Figure 6.1). This graphic organiser includes a section for self-reflection using a continuum ranging from I need to be taught how to do it (one star), to, I can explain it (five stars).

Figure 6.1 Xena’s My Learning Goal Sheet

Source: Sharon, Observation term 3

When observing Sharon’s students being asked to state their goal for their writing, they were sometimes seen referring to these sheets but other times were seen to answer independent of their sheet.

An analysis of the transcribed interviews indicated that strategy use was regularly referenced by the teachers. Strategy use refers to when students use learning strategies that are planned and selected to accomplish their goals (DiBenedetto & Zimmerman, 2013). In her term 3 interview, Maree mentioned that she needed to ask the students more regularly, about what
strategy they were going to use so it was forefront in their thinking. Then in her term four interview, she mentioned she encouraged her students to use strategies to enable their learning, for example looking for role models and then getting them to model their strategy to the class. In her term one interview, Adele spoke about providing her students with a list of strategies they could use to enable their learning. Encouraging students to use a prompt sheet listing sentences starters was often mentioned by the teachers. Adele also mentioned prompting her students to use visualisation as a strategy so they remembered to keep the audience in mind when writing.

An extract of this interview transcript is presented below.

… we have been using the visualising strategy so if you’re reading something, the person who is reading it, the audience, should be able to visualise what the author is saying. Why I made that connection was so they think of their audience when writing. What if you have a sizzling start – one of the boys answered, “Yes you do that because you must think of the audience”. They want to be motivated to read it. (Adele, teacher interview term 2)

During interviews, Sharon mentioned various strategies she encouraged students to use to support their writing development e.g. a scaffolding strategy to extend sentence complexity; sounding out words or phonic cards to support spelling; using charts listing adjectives when required to add detail and using a red pencil and peer-editing to revise writing.

During her term one interview, Sharon was asked questions to guide her to reflect on how she supported students to SRL. When asked what she would do differently if she had her time over, she mentioned that she wished she had drawn the students’ attention to the displays planned to support their learning, during both the lesson introduction and during writing.

I had planned to give them the keys to use, like reminders. I did have the visual display up on the whiteboard which some of the children just naturally looked at. It had the sentence starters and key words for persuasive text but throughout the lesson I didn’t refer back to it. (Sharon, teacher interview term 1)

She was also asked was there anything you did today so that some of the students could take control of their own learning?

So having the visual display and the learning intentions displayed and the key words and the sentence starters were all planned but they were not referred to enough throughout the lesson for them to remember to check them. I did ask them today to start with “I strongly believe…” and they all did this so that’s one positive that they are starting to use the language, which is one of our aims. (Sharon, teacher interview term 1)
Then during her term four interview, Sharon was asked how she monitored her students’ ability to SRL, she responded saying she asked them questions about the strategies they were using or planned to use (teacher interview, term 4).

**Asking probing questions to support SRL.** As mentioned, it was requested that the teachers asked their students short, probing questions focused on self-regulatory processes such as setting goals, strategy planning, strategy use and reflection, with the intention of gaining information about the student’s self-regulated thoughts, feelings and behaviour. The teachers were provided with a protocol to guide them with this questioning (see Figure 6.2 displayed below). The teachers’ overall adherence to the protocol showed varying levels of consistency.

Figure 6.2 Protocol of Questioning from Microanalysis Observations

<table>
<thead>
<tr>
<th>Prior to beginning writing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - “Do you have a goal for your writing?”</td>
</tr>
<tr>
<td>2 - “What do you need to do to achieve this goal?”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>During writing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>“What strategy are you using to help you write?”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On completing of writing: Prior to giving the student feedback, ask them to …</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - “Point to the face that shows how you feel about how you performed during writing time” …..then…..</td>
</tr>
<tr>
<td>2 - “What did you do that made you feel that way?”</td>
</tr>
</tbody>
</table>

Collectively, the teachers consistently asked what goals had the students set just prior to beginning writing, and towards the conclusion of the lesson, they consistently prompted the students to reflect on their performance. In contrast, the teachers were inconsistent with asking the students if they had planned a strategy to help them achieve their goal and later, what strategy did they use to achieve their goal. A summary of this analysis is presented below in Table 6.2. It is evident that only in term four, were the teachers consistent with their use of the protocol.
Table 6.2 Metalearning Questioning

<table>
<thead>
<tr>
<th>Term</th>
<th>Do you have a goal for your writing?</th>
<th>What do you need to do to achieve that goal?</th>
<th>What strategy did you use to help you write?</th>
<th>Point to the face...What did you do that made you feel that way?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8 out of 8 were asked*</td>
<td>4 out of 8 were asked</td>
<td>2 out of 8 were asked</td>
<td>8 out of 8 were asked</td>
</tr>
<tr>
<td>2</td>
<td>9 out of 9 were asked</td>
<td>5 out of 9 were asked</td>
<td>6 out of 9 were asked</td>
<td>9 out of 9 were asked</td>
</tr>
<tr>
<td>3</td>
<td>9 out of 9 were asked</td>
<td>5 out of 9 were asked</td>
<td>5 out of 9 were asked</td>
<td>9 out of 9 were asked</td>
</tr>
<tr>
<td>4</td>
<td>9 out of 9 were asked</td>
<td>7 out of 9 were asked</td>
<td>9 out of 9 were asked</td>
<td>9 out of 9 were asked</td>
</tr>
</tbody>
</table>

Source: Microanalysis observations from terms 1, 2, 3 and 4

* one child was absent during term 1 observation

A few plausible explanations exist for why the teachers consistently asked the first and last questions and not the strategy use questions. To begin with, the teachers were accustomed with setting learning goals for their students’ learning (in the form of learning intentions) and therefore it can be assumed they expected them to be thinking about a learning goal.

Furthermore, observations revealed that asking the students to reflect upon their learning and their performance was consistently evident as part of the conclusion of lessons. In contrast, aside from when the teachers were requested to use the questioning protocol with the student participants (presented above as Figure 6.2), there was no evidence of the teachers asking other students what strategy they intended to use, or at the conclusion of their writing, what strategy they used to assist their writing. It appeared that the teachers were asking this sequence of metalearning questions due to their participation in the study and the strategy use questions were perhaps not part of their normal routine. A further possibility was that the researchers’ presence prompted the teacher’s memory somehow at the beginning and the end of the lesson but during the business of the middle section of the writing lesson, the protocol was not thought of.

Interestingly, during term three interviews, Marie was asked if she used questioning similar to those from the protocol when not being observed and her response was as follows.

Yes, I’ve tried to get into that routine. I think it’s quite a nice little routine to do while they are writing and I often ask them those questions as a whole group. It really does focus them in. It focuses them in to whether they need to use conjunctions, need to write an interesting beginning or add in description or whatever the goal is. It really does help to make it clearer in their mind. (Maree, teacher interview term 3)

Do you see them benefitting from being asked what strategy they are going to use and if so, how?
Yes. I don’t probably follow up enough with that. It’s probably beneficial when they hit a pause or an obstacle so they then know to use the props on the board or the writing on the poster. It’s probably good to have them say it out loud [i.e. the strategy] because you don’t know if they all know it. There may be one or two children who know it. To be honest, I haven’t followed up that particular question that much. (Maree, teacher interview term 3)

Overall, the results presented above in Table 6.2, show that teachers were inconsistent with their questioning of students about strategy planning and strategy use. This result is consistent with Marie’s admission in the above interview transcript that she tended not to ask the students what strategy they planned to use when writing. It is evident in Marie’s response, that despite her not always following this routine she does think it beneficial, suggesting that it helps students to focus their learning as they then have a goal in mind, and that prompting them to think of a strategy means they know what to do when experiencing difficulty.

**Regulating reflective learning.** The following interview transcript extract provides an explanation from Sharon highlighting her desire for her students to be reflective learners and her statement ‘we have already begun to get the children writing a reflection at the end of a session’ inferring that the other teachers also use this practice.

*I want the students to be reflective learners. Across the subjects we have already begun to get the children writing a reflection at the end of a session, [particularly] when we’ve set a task that hasn’t involved a lot of writing and has been more oral. It is so they can articulate what they have learnt at the end of the session. (Sharon, teacher interview, term 1)*

The following interview transcript extract presents an explanation from Adele about how she conducts a whole class self-evaluation activity by using the fist-to-five strategy so all her students engage in reflection of their performance.

*When they’ve done their writing we’ll come back and self-evaluate. For example, I’ll ask “Did you sustain your writing …did you write for this amount of time?” …. I use the fist-to-five strategy [to get them to engage in self-evaluation] (Adele, teacher interview, term 1)*

Students writing reflections following a lesson was also evident in Maree’s learning space. Displayed below in Figure 6.3 is a photo of a display from Maree’s learning space where samples of students’ self-reflections about the writing process are evident.
How students reflected upon their learning. The analysis of data sourced from videoed, microanalytic observations are presented next to illustrate what students said when asked questions that guided them to reflect upon their writing performance. During observations, on completion of writing and prior to giving feedback, it was requested that teachers ask each of their three students the following question: **Point to the face that shows how you feel about how you performed during writing time – and then ask What made you feel that way?** The students’ responses are presented below in Table 6.3 along with an image of the face (😊😊😊) to which they pointed. In the far left column, each student’s capacity to SRL is listed next to their name (i.e. as identified by their teacher prior to beginning this study).
### Table 6.3 Microanalytic Observation Data: Self-evaluations

#### Adele’s three students

<table>
<thead>
<tr>
<th></th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
<th>Term 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foci of LI/S C</strong></td>
<td><strong>Text purpose – To persuade</strong></td>
<td><strong>A writing process approach</strong></td>
<td><strong>Text structure - narrative</strong></td>
<td><strong>Text structure - procedural</strong></td>
</tr>
<tr>
<td><strong>Term 1</strong></td>
<td>☺️ I stayed in my chair … I am happy about my writing because this is my first persuasive writing</td>
<td>☺️ I’ve used a lot more describing words</td>
<td>☺️ Because I think I wrote well about my solution and this is only the second time we have written about solutions</td>
<td>☺️ …because I’ve tried to remember what the instructions are. When asked, “What was your goal?” She said to write a procedural text</td>
</tr>
<tr>
<td><strong>High SRL – Eve</strong></td>
<td>☼️ I did good writing … I did extra writing</td>
<td>☼️ Because I left some spaces</td>
<td>☼️ He could not initially explain why he felt happy about his writing. When asked again he said, “Because it is neat”</td>
<td>☼️ I chose the happy face because I remembered that at home I put the milo in first and then the milk and stir it together</td>
</tr>
<tr>
<td><strong>Med SRL – John</strong></td>
<td>☹️ Student response was inaudible</td>
<td>PG - To leave spaces between words</td>
<td>☹️ Because I really had a go. When asked “A go at what?” he said, Writing a solution. <em>PG - To write a problem and a solution</em></td>
<td>☹️ Because I made a lot of mistakes</td>
</tr>
<tr>
<td><strong>Low SRL – David</strong></td>
<td>☹️ Student response was inaudible</td>
<td>PG - To leave spaces between words</td>
<td>☹️ Because I really had a go. When asked “A go at what?” he said, Writing a solution. <em>PG - To write a problem and a solution</em></td>
<td>☹️ Because I made a lot of mistakes</td>
</tr>
</tbody>
</table>

#### Maree’s three students

<table>
<thead>
<tr>
<th></th>
<th><strong>Text purpose – To persuade</strong></th>
<th><strong>A writing process approach (plan, draft &amp; revise)</strong></th>
<th><strong>Conjunction use</strong></th>
<th><strong>Text structure - procedural</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foci of LI</strong></td>
<td>☺️ I think my reasons are good.</td>
<td>☺️ I feel happy because I did a good job planning, revising and editing my writing. It made me feel good because I made these mistakes in my writing and by revising and editing I fixed them</td>
<td>☺️ I chose the happy face because I achieved my goal … My learning goal was to write more than two sentences</td>
<td>☺️ I used lots of doing words and you can understand my writing. <em>PG - To write 5 steps with a verb at the beginning of each sentence</em></td>
</tr>
<tr>
<td><strong>High SRL – Amy</strong></td>
<td>☺️ I chose happy because I did neat handwriting … I did some words correctly and some words not wrong.</td>
<td>☺️ I chose happy and successful because I reached my goal to reread my sentences and do a good job <em>PG - To finish my draft</em></td>
<td>☺️ I achieved my goal which was to put a conjunction between two sentences <em>PG - To join two sentences together</em></td>
<td>☺️ I used adjectives in my sentences</td>
</tr>
<tr>
<td><strong>Med SRL – Robert</strong></td>
<td>☹️ Student response was inaudible</td>
<td>☹️ Student response was inaudible</td>
<td>☹️ Student response was inaudible</td>
<td>☹️ Student response was inaudible</td>
</tr>
</tbody>
</table>
### Sharon’s three students

<table>
<thead>
<tr>
<th>Foci of LI</th>
<th>Text purpose – To persuade</th>
<th>A writing process approach</th>
<th>Conjunction use</th>
<th>Text structure - procedural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low SRL – Tony</td>
<td>☀️ I think I did a really good job. I tried my hardest. I tried hard at writing.</td>
<td>☀️ I felt happy because I succeeded my goal. My goal was to write more than two sentences</td>
<td>☀️ I chose the happy face because I completed my goal and put in some ...(looking at the whiteboard to prompt his memory)... conjunctions...and that was my writing goal.</td>
<td>☀️ I kept thinking about what we did before and I kept on writing when I thought back to what we did before PG - To have a verb at the beginning of each sentence (was modelled)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>High SRL – Jeffrey</th>
<th>☀️ ”I achieved my goal ... I was checking for spaces” PG - To use finger spaces</th>
<th>☀️ I was nervous</th>
<th>☀️ I wrote a lot PG - To add more detail</th>
<th>☀️ I wasn’t getting distracted PG - To listen and not sit next to friends</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Med SRL – Annie</th>
<th>☀️ Sharon did not ask: What did you do that made you feel that way?</th>
<th>☀️ Because I’m worried about what I’m going to write ... sometimes I’m worried I won’t get the words right</th>
<th>☀️ I am not concentrating enough</th>
<th>☀️ I was feeling comfortable. When asked what was making her feel comfortable she said “I know what to do”</th>
</tr>
</thead>
</table>

| Low SRL – Xena | ☀️ Because its lots and lots of writing. | ☀️ When I write I feel happy because I prove that my writing is good | ☀️ Because I improved my writing. When asked how, she said by sounding out my words PG - To sound out words | ☀️ I was feeling happy but then some of my writing was messy |

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dark grey shading: Self-reflection mentions an aspect of the LI/SC  
light grey shading: Self-reflection mentions or directly references an aspect of personal goal (PG)  
no shading: Self-reflection does not mention any aspect of LI/SC or personal goal

It is evident in Table 6.3 that most of the students reported feeling happy (☀️) about their writing (31 out of 35 replies). It is also evident that all students provided a self-reflection, a majority of which either made mention of an aspect of the set LI/SC (shaded dark grey) or to an aspect of their personal goal (shaded light grey). It appears, that when students mentioned an aspect of their personal goal or a LI/SC (without directly referencing them), they were inferring that they were happy because they had achieved their goal. Eve, Amy and Jeffrey (all three identified as high SRL capacity) and Tony (identified as low SRL) were the most consistent at referencing a LI/SC or goal in their reflection. These findings indicate that Year 1 writers appeared well capable of self-evaluating how they felt about their writing, mostly expressing positive sentiments and reasoning. It is also indicated that a majority of students’ self-evaluations
were guided by their personal goals or the focus of LI/SC set by their teachers, suggesting self-
evaluation in the form of reflecting upon performance can be guided by teachers sharing LI/SC.

**Students with varied capacities to SRL reflecting upon their performance.** The data
presented previously in Table 6.3 was further analysed to investigate what students (with varied
capacity to SRL) said, when asked to reflect upon their writing performance. This analysis
revealed that although all the students provided a self-reflection, the high capacity students
mainly stated reflections that mentioned or directly referred to either the LI/SC or their personal
goals. The high capacity students referred to an aspect of either the LI/SC or their personal goals
on 10 out of a possible 12 occasions, the medium capacity students did so on 5 out of a possible
10 occasions and the low capacity students did so on 6 out of a possible 10 occasions. It seemed
that overall, the students seemed capable of understanding that reflecting upon one’s
performance involves assessing one’s performance against set goals and that perhaps the
medium and low capacity students could be more consistent if prompted more directly by asking
if they achieved their goal.

**Chapter Summary**

In relation to how Year 1 writers self-regulated their learning, or were supported to self-
regulate their learning, this analysis is summarised by the following key points. Most students
chose goals relating to the LI, some of whom could not articulate an understanding of the intent
behind the LI. Alternatively, those students who chose a goal not relating to the LI, tended to hold
onto it beyond it being relevant or appropriate to their learning needs. The observation data
revealed that one teacher provided a specific process to support her students to select
personalised goals (which the other two teachers appeared to let their students determine their
goals for themselves). The process provided by Sharon led her students to choose personalised
goals that mostly related to aspects of writing relating to feedback they had recently received
rather than the set LI/SC. Regardless of student goal choice and strategy focus (of which there
was a variety), the students appeared capable of achieving the SC to at least to some degree. It
should be noted that the SC were focused on writing as opposed to skills specific to SRL.

Not surprisingly, the analysis revealed that teachers believed that aligning learning goals
with instructional strategies is beneficial, as is directing students to use those strategies. The
teachers consistently asked students about goal setting and prompted them to reflect on their
goals when writing, but did not consistently ask about strategy planning or strategy use. That when asked to, the students appeared well capable of self-evaluating how they felt about their writing, mostly expressing positive sentiments and reasoning. A majority of the students’ self-reflections (more so those with a high capacity to SRL) were guided by personal goal choice or the focus of LI/SC set by teachers, therefore indicating that engaging students in self-assessment can be guided by first sharing LI/SC. This analysis suggests that the medium and low capacity students would perhaps benefit from being reminded to think of their goal when reflecting upon their performance.

Overall, the findings reported in this chapter indicate that the teachers planned and implemented a variety of supporting practices and processes to support metacognition and engagement in SRL. It was reasoned that the teachers expected all their students to share responsibility for the learning by working through a learning cycle structured around metalearning strategies that supported them to cognitively process their learning. These strategies included goal setting, strategy planning, strategy use and reflection. Most of the students (despite their capacity to SRL) appeared to engage in the use of some or all of these strategies. During lesson introductions, the teachers were seen supporting their students to make links between new and old learning by consistently prompting students to use their feedback loop. Further discussion of why the teachers enabled the learning this way, is presented next, in chapter 7.

In the chapter that follows, the discussion will focus on the next stage of argument and analysis to answer the primary research question and subsidiary research questions. First, the sub-claims from this investigation will be presented with supporting evidence. Then each claim will be discussed with reference to research and professional literature.
Chapter 7: Discussion

The primary finding from this study was the detailed and nuanced account of the type of interactions that occur between a social agent and young learners, and how these interactions may foster SRL and writing success. Following the analysis presented in chapters 4 through to 6, these interactions are conceptualised as three core-learning processes. When teachers implemented what was interpreted as an intentional learning process, it was determined that their aim was for the students to engage in SRL by having a clear focus for their learning and an understanding of key writing concepts. When the teachers implemented what was interpreted as socially-structured learning processes, it was identified this produced transparent learning opportunities enabling the students to better meet the challenge of engaging in SRL. Then finally, when the teachers were seen supporting their students to engage in SRL by metacognitively regulating their learning, it was identified that the teachers were doing so by supporting their students to use metalearning strategies.

In this chapter, each of the above-mentioned processes is considered with a theoretical explanation. Each explanation is linked to evidence from this investigation and supported with leading theory and research. This conceptualisation includes discussion of how each process functions and the potential impact that each process has on supporting students to engage in SRL. The first section focuses on the implementation of an intentional learning process; the next on the implementation of socially-structured learning processes; and the third focuses on metacognitive regulation of learning. The concluding section of this chapter presents an overview of the core learning processes discussed, including the functions and impact of each process.

The notion of engagement is mentioned during forthcoming discussion so it necessary to provide an understanding of how this term was defined in this study. As described by Jarvela, Jarvenoja, et al. (2016), engagement as a concept is most commonly considered with regard to individual student engagement and as a dichotomy referring to low versus deep engagement or on-task, off-task behaviour (Finn, Pannozzo, & Voelkl, 1995). However, because during this investigation, the learning context witnessed was interactive, the use of the term engagement in this study referred to the interaction between the learner and those whom they collaborated with during the process of learning. Engagement in collaboration was considered cognitive and socioemotional in nature and occurred when working through the various phases of learning that
support students to engage in SRL. These include the forethought, performance and reflection phases of SRL (Jarvela, Jarvenoja, et al., 2016; Zimmerman, 2000).

**Intentional Learning**

The findings suggested that teachers supported their students to engage in SRL through implementation of an *intentional learning process*. First, it is reasoned that the sharing of Learning Intentions (LI) and Success Criteria (SC) provided a clear purpose and focus to the learning, by promoting conceptually focused learning and process-orientated thinking. Then it is reasoned that providing feedback focused on SC, guided their students' self-assessment and that prompting the students to use a feedback loop, and supported them to make connections. These claims are supported by the literature and research central to the notion of formative assessment (FA) and SRL.

Engaging students in purposeful learning. The analysis of data collected throughout this investigation revealed that Formative Assessment (FA) strategies such as the sharing of LI and SC with students provided them with a clear focus and purpose for their learning. It is reasoned that having a clear purpose for learning supported the students when setting personal learning goals, a practice that is recognised as a key component of SRL (Effeney et al., 2013; Zimmerman & Schunk, 2011). Data reported in chapter 4 revealed it was a school-wide expectation that the teachers pre-planned, displayed and referred to LI and SC throughout lessons. The teachers believed this practice provided clear intent for the learning and promoted independence. For example, a teacher participant was seen sharing the following LI during a lesson introduction - *every story has a problem and a solution*. Information provided during teacher interviews revealed the teachers did this to provide both a focus and purpose to the learning and to clarify understanding of how narrative genre is structured. Observations also revealed that students benefited from being able to articulate what LI was set as this appeared to support their understanding and interpretation of the intended learning, and support their performance, leading to competence (Cazden, 1981; Hattie & Donoghue, 2016; Lau et al., 2015).

FA practices, including the sharing of LI and SC link well with SRL (Clark, 2012; Clarke, 2001; Hattie, 2012; Leahy et al., 2005; Wiliam, 2014). After all, the intention of feedback is to be formative by supporting students to learn (Black, 2015; Brookhart, 2008; Clark, 2012).
common pattern across SRL models is that learners have goals (Winnie, 2014b). Clark (2012) argues that, ‘formative assessment actualises and reinforces self-regulated learning strategies among students’ (p.205), reasoning that FA can make thinking transparent and stressing that for students to begin to be able to learn to SRL, they must share responsibility for the learning and assessment processes. Overall research indicates that the impact of FA on student achievement and SRL is positive (Black, 2015; Black & Wiliam, 1998; Clarke, 2001; Hanover Research, 2014; Hattie, 2012).

Research conducted by Graham and Harris (2013) supports the notion that sharing the intended learning with students provides clarity, challenge and purpose and improves the quality of what students write. When Leahy et al. (2005) conducted sequenced workshops with teachers to identify FA strategies in an attempt to conceptualise the notion of FA, it was revealed that, ‘Clarifying, sharing and understanding learning intentions and success criteria’ was one of five nonnegotiable practices (p. 20). Wiliam (2014) also promotes this process, believing it supports learners to become clear about the goals they pursue during learning. Interestingly, Leahy et al. (2005) reasoned that low achievement can often be attributed to students not understanding what is required of them. A survey of literature conducted by Hanover Research (2014) showed clear support for the efficacy of explicitly stating LI and assessment criteria in improving student learning outcomes. A case study investigating what happens when teachers in inclusive classes make or do not make the learning goal clear to their students, revealed that if teachers can develop greater skill in communicating the learning objective throughout the lesson, student learning and behaviour will improve (Reed, 2012). During Reed’s (2012) investigation, when students were not provided with a clear learning objective, ‘student responses were often unfocused, shorter in duration, more hesitant, contained less sophisticated language, and necessitated more cued elicitations’ (p. 20).

Evidence from this investigation suggests that sharing LI can support students to set personal goals that are relevant to the focus of the learning. During this study, an analysis of how sharing LI influenced personal goal choice revealed that those students who were left to use independent choice selected personal goals that mostly matched the LI. In contrast, those students who were supported by a process in which goal options were listed as options for them to choose and which were not necessarily relevant to the LI, were seen to choose largely
behavioural-focused goals or secretarial-focused goals, none of which matched the LI. However, further analysis revealed that although their goal selections were not clearly relevant to the LI or the specific focus of the learning, they were somewhat relevant to other aspects of the students’ learning. It was concluded that although sharing LI appears to support personal goal setting, personal goals do not need to match LI in order to be relevant to the students’ overall learning.

**Engaging students in conceptually focused learning.** A further finding from this study was the notion that conceptually focused LI led students to a deeper understanding and potentially supported them to transfer their learning to new contexts. This was evident when teachers were observed focusing on the construction of LI based on either genre theory or the process approach to writing. It was inferred that teachers were attempting to teach writing with conceptual intent to promote the transfer of knowledge and skills associated with writing and to focus the learning on the process of writing as opposed to just the product. An analysis of writing samples was conducted to investigate if conceptually-based LI influenced writing development. Because the focus of the LI shared with students were predominantly concerned with authorial dimensions, the aim was to determine, if across the year, there had been stronger growth in the authorial writing dimensions (text structure, sentence structure, vocabulary) compared to secretarial writing dimensions (spelling, punctuation, handwriting). The results presented in chapter 4 showed that overall, the students’ writing development showed growth across most dimensions of writing (two of the nine students showing growth in all six dimensions and seven students showing growth in five of six dimensions). A comparison of growth between the writing dimensions revealed that four of the nine students showed strongest growth in authorial dimensions (most of which are conceptually-based), and two of nine showed equal growth (across both authorial and secretarial dimensions), and three of nine showed the strongest growth in the secretarial dimensions of writing.

Research by Lau et al. (2015) investigating how elementary students engage in self-regulation, revealed that students who set process-oriented goals demonstrated not only greater motivations to persist in tasks, but also showed more strategic strategy use, and adaptive reflections of their performance. It was recommended that teachers teach students to make adaptive evaluations of performance, based on the process of learning rather than on the outcomes. In contrast, research by Graham et al. (2012) revealed that goals classified as a
specific goal and/or task-focused has a positive impact on writing quality. The analysis of LI and SC used by teachers during this investigation, indicated that the shared LI tended to be conceptual or process-focused whilst the SC tended to be product-focused, elaborative or differentiated. This suggests the teachers shared LI and SC with the aim of providing for a combination of deep and surface level learning with an increasing level of challenge (Hattie, 2012). Lastly, conceptual-focused teaching is recognised for improving students’ capacity to remember (Bransford et al., 2000; Erickson, 2012; Ritchhart & Perkins, 2008). It is suggested, that as new facts become conceptual, a deeper understanding develops and new learning is refined.

**Engaging students in self-assessment.** Evidence reported in chapter 4 revealed that teachers’ feedback focused on SC helps guide students to engage in self-assessment. It is reasoned that engaging students in self-assessment supports them to SRL because it is an essential component of SRL (Brown & Harris, 2014; Cleary et al., 2012; Graham et al., 2012; Harris et al., 2015; Hattie, 2012; Zimmerman & Labuhn, 2012). Not surprisingly, during this investigation the teachers claimed that constructing and sharing SC can guide learning by focusing students’ attention on what they need to do, to achieve their learning intention e.g. to add more detail. After all, feedback focused on criteria is a model of instruction used to some degree in most classrooms (Brookhart, 2008, 2013) and sharing SC is generally considered good assessment practice (Brookhart, 2013; Brown & Harris, 2014). Furthermore, feedback is recognised to influence SRL processes (Labuhn, Zimmerman, & Hasselhorn, 2010).

Nevertheless, it was also revealed that the students were expected to share the responsibility for their learning by engaging in self-assessment when guided by feedback focused on SC and by actively engaging in their own learning cycle. Self-assessment requires students to evaluate their own performance, learning output and level of engagement in learning processes (Brown & Harris, 2014). Brown, Andrade, and Chen (2015) recommend that there is still much to understand concerning how accurately students can self-assess as well as the effects of attempts to improve self-assessment. Research evidence indicates that self-assessment can contribute positively to learning outcomes but the exact effects are highly variable because of threats to validity (Brown & Harris, 2014).
It was reported during this investigation that teachers expected their students to use SC as a possible strategy for having a way of knowing that the desired learning had been achieved. An analysis of how teachers constructed SC was conducted by categorising the SC observed to be shared with students during the investigation. It was revealed that teachers used a variety of product-focused SC, elaborative criteria and differentiated SC to guide self-assessment. A closer examination of how the product-focused SC were used during instruction indicates some were used in conjunction with scaffolding (e.g. graphic organisers) and others as part of a larger learning process (e.g. a SC based on the writing process approach). This suggests that although SC were worded as product-focused criteria they were used in conjunction with other strategies to focus self-assessment within the learning process.

During this investigation, when the teachers provided explanations of how they supported the students to SRL, they described guiding students’ thinking with ‘linking’ questions that, on reflection, together formed a cycle of learning driven by feedback. This cycle included sharing the LI to focus the learning, then sharing and questioning the criteria for success so progress could be monitored, all whilst giving feedback. Teacher descriptions were consistent with the five FA strategies proposed by Leahy et al. (2005) and these were discussed in chapter 2. These strategies were applied to research conducted by Wylie and Lyon (2015) to investigate the breadth and quality of teachers’ implementation of FA practices. The findings revealed that teachers need to work through all five of the FA strategies proposed by Leahy et al. (2005) in order for the students to internalise the feedback provided, and for students to be able to apply it to their learning. Wylie and Lyon (2015) suggested that when teachers did not work through all five of the strategies, they were unable to use formative evidence to effectively to inform the next instructional step.

Interview data and observation data, reported in chapter 4 revealed that the teachers supported their students to self-regulate their own self-assessment by teaching them to follow a process of self-editing (one phase of the process approach to writing). A concern was expressed regarding finding available time to conference with students and time to support them with self-assessment. The interview transcript extract presented below expresses Sharon’s expectation (a teacher participant), that her students can and should attempt to engage in self-assessment.
They know they need to reread their work, do the editing and revising which simply could be underlining the words in red that they know they have spelt wrong…. When directed he reread his work and added more detail. That is him self-regulating. (Sharon, teacher interview, term 3)

This extract, in conjunction with observation data that revealed teachers shared SC with their students and reminded them of these during instruction (like this one shared by Sharon during term 2, *I can use adjectives to add detail to my writing*), imply SC were used to support self-assessment. Although samples of writing were shown to students for modelling purposes, there was no clear evidence of the teachers showing the students worked samples of writing for the purpose of self-assessment. According to Hattie and Yates (2014), showing worked samples of writing, from various levels of success, allowed students to gauge where they are at and what they need to do to improve their writing. This process is referred to as *clarifying criteria of success* and is essential when providing effective feedback (Hattie & Yates, 2014; Leahy et al., 2005).

According to Brookhart (2008), self-assessment or what she refers to as *self-referenced feedback*, can help students learn to adapt the processes or methods they need to use to achieve success. The most effective feedback can either be a comparison of a student’s performance with a past performance e.g. ‘See how well that works?’…‘You had trouble with that last time’ (p.23) or a comparison of a student’s work with an established criteria (e.g. *I can use a plan to write a draft*). Research by Harris and Brown (2013) indicated that teachers and students require deeper understanding of how to use peer- and self-assessment for improvement and self-regulation purposes. It was suggested that teachers provide concrete instruction in peer- and self-assessment for example asking students to estimate how well they think they will do compared to their last performance (Brown & Harris, 2014). Brown and Harris (2014) describe self-assessment as a learnable competence and recommend that it no longer be treated as an assessment practice but instead as an essential competence for self-regulation and therefore, needs to be taught.

Engaging students in making connections. According to Cleary and Zimmerman (2012), when students are supported to work through the three SRL cyclical phases central to the SRL framework (i.e. forethought phase, performance phase and reflection phase), their cyclical thinking and use of strategic behaviours (like engaging a feedback loop) is possible. During this
investigation, the close analysis of one teacher’s lesson introduction revealed that prior to introducing the new learning foci, the teacher guided students’ thinking with questions prompting them to recall previous learning foci and thus guiding them to engage in their feedback loop. With reference to Hattie and Timperley’s (2007) fundamental feedback questions: Where am I going? How am I going? Where to next?, it was realised that the first question being asked was not Where am I going? but rather Where have I been? It was reasoned that to ask students about what they had been learning (i.e. prior to asking them to focus on Where am I going? or What are my goals?) supported them to make important connections between previous learning and new learning, therefore engaging them in use of a feedback loop.

In this section, the discussion of how an Intentional learning process supported students to SRL was discussed. It was suggested that LI and SC were shared with students so they could engage in purposeful learning, process-oriented thinking, conceptually focused learning, self-assessment and making connections. It has been argued that all of these components of an intentional learning process, support students to SRL by focusing their learning, guiding them to engage in self-assessment and strengthening their understanding.

**Socially-structured Regulation of Learning**

Next, it is proposed that the teachers supported their students to engage in SRL through the implementation of socially-structured learning processes. It is suggested that systemising the learning, engaging the learners in peer-supported learning and scaffolding the instruction helped transform challenging learning into manageable learning. This claim is supported by discussion of evidenced-based writing pedagogy, literature and research specific to mediated learning and self-regulated learning. Challenges in learning are necessary for students to engage in strategic regulation of learning (Hadwin & Oshige, 2011). The findings from this study indicate that socially-structured support for learning is necessary so this challenge is a manageable one and not a case of frustration (Mariani, 1997; Wilson & Devereux, 2014).

**Engaging students in a challenging but manageable learning process.** Evidence reported in chapter 5, revealed that the teacher participants implemented pedagogical procedures to explicitly support writing development by providing systemised learning. The pedagogical procedures evident during this investigation included a structured lesson sequence featuring an introduction (with whole class); writing time (students supported in small groups or
as an individual); and reflection time (with whole class) as well as a genre approach and process approach to writing. It was suggested that by systemising the instruction using evidenced-based pedagogical procedures such as these, in which the teachers could share regulatory control of the learning, enabled them to provide transparent instructional processes to engage their students in challenging but manageable learning opportunities, thus supporting them to engage in SRL.

During all of the twelve observed writing lessons, the sequence ran as follows. Firstly, the teachers introduced the learning to the whole class by engaging the students in some language experience and modelled writing (McCarrier et al., 2001), during such time the LI/SC were shared which were mostly focused on writing concepts or skills. During modelled writing, the whole class instruction began with teachers providing explicit demonstrations of writing. Alternatively, if using a shared/interactive writing approach, the teachers and students composed the text collaboratively (Pearson & Gallagher, 1983). The overall aim was designed to support the young students’ progress towards becoming independent writers (McCarrier et al., 2001). Directly following the introduction, the students would then work in small groups for independent writing, following which they would be called back together for sharing and reflection of their learning as a whole class. As stated, this systematic structuring of the lesson into three phases was evident in all three learning spaces. During independent writing, the teachers supported writing development by roaming between groups conducting targeted teaching, encouraging peer-support or conducting short sessions of guided writing with the students selected for the case study. Displays showed reflections were shared as a whole class during the lesson conclusion (which was commonly focused on genre type or a process approach to writing).

Research promotes literacy teaching that is systematic, explicit, instructionally dense, and which is driven by multiple goals (Roth & Guinee, 2011). Research by Roth and Guinee (2011) revealed that when Interactive Writing instruction was conducted with first grade writers, they made greater gains on nine out of ten of the individual sub-components of writing measured using a traits of writing rubric. It was suggested that this approach improves the children’s independent writing without the need to increase the time spent on writing instruction. Their research revealed that just ten minutes a day of teaching writing using the interactive writing approach had a positive impact on writing. Nevertheless, it was also recommended that this not
be the only form of writing instruction, but rather it be a valuable part of a balanced approach, including shared literacy experiences, and independent problem solving within a literacy rich classroom.

It was proposed in chapter 5, that the use of a *genre approach* to writing instruction supported the students’ understanding of genre types, and in turn supported them to SRL. It was reasoned that through the use of the genre approach (i.e. modelling of text genre, participation in learning discussions with peers and teachers), the students were systematically immersed in metalanguage associated with each text purpose, common language features and text structures. Through this immersion, the students were seen developing a deeper knowledge of each genre, providing them with the necessary understandings to engage in SRL. Furthermore, this metalanguage was also then available for the students to use when applying self-talk or metalearning strategy use, both processes of which support students to SRL and will be discussed later in this chapter.

Genre theory has had a considerable impact on Australian literacy education and those who support this approach are just as concerned with *what* students are learning, as they are with *how* they are learning (Derewianka, 2015). Christie and Derewianka (2008) argue that all students deserve the opportunity to learn to write and when teachers have the appropriate knowledge to provide a functional approach to writing instruction, they can guide more effectively their students as they learn to write. There has been much research conducted on teaching of genres in schools (Chen, 2008; Christie & Derewianka, 2008; Derewianka, 2015; Martin & Rose, 2008; Rose, 2006). What underpins this approach to writing instruction ‘is that explicit teaching of schematic structures that characterise particular genres is critical to learners’ success in appropriating these genres’ (Chen, 2008, p. 194). Lewis (2014) revealed that children’s writing is genre-specific, indicating that features appear in one genre that are not necessarily apparent in an alternative genre. Olinghouse, Graham, and Gillespie (2015) provided support for the theoretical propositions that discourse and topic knowledge are important elements in the writing of young developing writers. According to Olinghouse et al. (2015), two areas of knowledge that are significant for writers include knowledge about the writing topic and knowledge about how to write. This knowledge includes genre knowledge, linguistic knowledge, knowledge about the reader, and knowledge about schemas for how to complete specific writing tasks.
Identifying the complexity that young writers may face when learning to write and planning instruction so they can meet these challenges is a key component of the genre approach to writing instruction. The importance of ‘learning about and using language’ when learning to write is reflected in the Victorian Curriculum: Learning in English (Victorian Curriculum and Assessment Authority [VCCA], 2016). This curriculum acknowledges the importance of learners gaining a consistent way of understanding and talking about language so they can reflect on their own speaking and writing. Although curriculum design was not the focus of this study, during the course of this investigation the realisation that the new curriculum promotes a Genre theory approach to writing, provides support for the notion that providing students with systematised learning can support them to engage in a challenging but manageable learning, which in turn supports them to SRL.

Evidence reported in chapter 5, revealed that the teachers integrated strategy instruction into a writing process approach to support the students’ writing development. The analysis of interview and observation data indicated that the teachers’ implementation of the process approach to writing, reflected that of the Self-Regulated Strategy Development (SRSD) model (Graham & Harris, 2005), a reworked version of the process approach. This approach was seen to support the students so they knew how and when to plan, write a draft, self-assess and then revise their writing. It is suggested that supporting students to regulate the process of writing in this manner further engages them in the learning process. Research shows that integrating strategy instruction into a process approach has a positive impact on students’ writing development, including those who are struggling writers (Graham & Harris, 2013; Graham et al., 2013; Graham et al., 2012; Graham & Sandmel, 2011). A meta-analysis conducted by Graham et al. (2012) revealed that strategy instruction which involves explicit and systematic teaching of the writing process, strategy use and specific knowledge about writing, has a dramatic and positive effect on the quality of children’s writing. Research investigating the effectiveness of implementing the SRSD model of instruction to support six first grade students, revealed SRSD can be beneficial for first grade writers (Zumbrunn & Brunning, 2013).

Engaging students in co-regulated learning. Evidence from teacher interviews reported in chapter 5, focused on how the teachers engaged their students in peer-talk so that students could hear a new perspective, hear information in peer-language – which the teachers
suggested assists students’ understanding by helping them to clarify thinking and refine their ideas. Similarly, the teachers identified peer-modelling as an effective supporting strategy when the students were unclear about what to do. One teacher highlighted an incident from an observation session in which a peer’s role swapped from being the regulating other to being the peer-learner, suggesting that the process of becoming a SRL is recursive and mutually beneficial. These findings are not surprising, considering that researchers commonly recognise that early in the learning process, students benefit from support from a teacher or a more advanced peer with respect to the regulation of the cognitive, motivational, and behavioural facets of the learning process (Boekaerts, 2011; DiDonato, 2013). When describing a co-regulation learning process, Hadwin and Oshige (2011), explain it as temporary sharing of self-regulatory processes and thinking between a learner and a more capable other (peer, teacher, parent), as they move towards becoming a SRL. Studies investigating co-regulated learning support the notion that young children can and do engage in three levels of regulation (i.e. self, co-, and shared) during authentic tasks in naturalistic settings (Cleary & Zimmerman, 2004; Hadwin & Oshige, 2011; Whitebread, Bingham, Grau, Pastenak, & Sangster, 2007).

Also evident in the analysis presented in chapter 5, was the notion that sharing responsibility of the learning with peers provides motivation. Research supports the notion that relational activities foster positive group climates, which in turn enhance student learning (Molenaar & Chiu, 2014). During this study, the teachers promoted co-regulated learning to support the students to engage in SRL. It is through reciprocal activity that peers mediate one another’s learning, often by asking questions and sharing or elaborating on ideas (Molenaar & Chiu, 2014). Furthermore, children tend to regulate their learning more when working in pairs or small groups as opposed to working alone (Hadwin, Oshige, Gress, & Winnie, 2010; Molenaar & Chiu, 2014; Whitebread et al., 2007). To claim that engaging students in co-regulated learning can support them to SRL is consistent with studies of learning that favour a social cognitive model of explanation. Karpov (2014) argues that SRL develops in the context of mutual regulation: ‘any joint activity of children in which they are engaged in mutual regulation will promote the development of their self-regulation’ (p. 91). Thus researchers of SRL tend not to restrict their view of SRL to individualised learning but rather include socialised forms of learning.
including seeking help from peers, coaches and teachers (Jarvela, Malmberg, et al., 2016; Zimmerman & Labuhn, 2012).

During this investigation, the practice of encouraging students to engage in peer-assessment was mentioned by the teachers, ranging from directing students to share their writing with a partner (i.e. so students received peer-feedback prior to approaching their teacher); to the class giving feedback to students, when writing was read aloud to the class. Harris et al. (2015) concluded that peer- and self-assessment could lead to increased student self-regulation and achievement. The notion that writing instruction be viewed as a social pursuit is supported by an investigation based on a synthesis of writing research (De Smedt & Van Keer, 2014). It was recommended that future investigations into writing instruction should blend strategy instruction with a structured form of collaborative writing to investigate its impact on cognitive and non-cognitive outcomes because no longer can writing be seen as a solitary endeavour. Following years of research into how to create a supportive environment for writers, Graham and Harris (2013) acknowledge the role of praise, goal setting and creating instructional arrangements where students write together!

A further insight from this investigation, concerning co-regulated learning, was that although the teachers were observed to encourage students to engage in help seeking and help giving, there was limited evidence of students engaging in these forms of peer-supported/co-regulated learning. It was concluded that encouragement alone is not enough; students need to be more explicitly supported to engage in co-regulated learning. Black (2015) argues that collaboration in group work can be productive and has intrinsic value when students engage in interactive dialogue, but stresses, students need to be carefully trained for group work.

Engaging students in a scaffolded learning process. Instructional scaffolding is designed support, necessary to enable learners to work through the challenge required for learning. It is assistance that is designed so a learner can progress with increasing independence as regulatory control of the learning is gradually released, so they get ‘to know not only what to think and do, but how to think and do, so that new skills and understanding can be applied in new contexts’ (Hammond, 2001, p. 5). As reported in chapter 5, the teachers strategically chose graphic organisers to scaffold students’ understanding of text structures, writing purpose and use
of language features associated with different genre. The teachers claimed to choose graphic
organisers with designs they thought would best support the students’ understanding and which
met their varying needs. In addition, the teachers were observed regularly using enabling
prompts to redirect the focus of the students’ thinking and to guide their understanding. It was
discussed that the teachers scaffolded instruction with graphic organisers and enabling prompts
to support the students to manage the challenge of writing, and by doing so, engaged their
students in a scaffolded learning process that supported them to engage in SRL despite it being
challenging.

Scaffolding is commonly viewed as an instructional technique, a tutoring process or tool
for bridging old knowledge to new, by internalising the language and actions of others (McGee &
Richgels, 2004; Tharp & Gallimore, 1988). However, scaffolding does not always require direct
human assistance; activities including instructional procedures and tools can also provide
mediating support (Palincsar, 1998). The teachers in this study described and/or were observed
using strategically designed displays to scaffold the students’ understanding of the writing
process as well as features of various genres of writing. When discussing how they used these
displays to assist the students’ understanding, the teachers acknowledged that in hindsight, they
could have referred to the displays more frequently during both lesson introductions and during
independent writing. They indicated that it is important that the students become aware of
displays, know how to interpret them and of their significance to the overall LI. The teachers
identified that this requires timely and quality intervention on their part. Consistent with the
literature, contingency is considered by some to be the heart of scaffolding and certainly
highlights the adaptive nature of scaffolding (Van de Pol et al., 2012) and in turn, diagnosis is
essential for contingency (Smit et al., 2013; Wood, 2003).

Analysis reported in chapter 5, further revealed the importance of making scaffolding
explicit to students, so they can make a connection between the scaffolding tools and processes
being made available to them, and the intended learning. During an observation of a lesson
introduction, a lack of an alignment between instructional practices and scaffolding became
apparent. The modelling of how to write a draft did not clearly match the LI (Good writers use a
plan to write a draft), no reference was made to the plan completed the previous day, and
meaningful links between the phases of the writing process were not made explicit. In contrast, comparing students’ writing performances across terms one (when no graphic organiser was provided) and two (when a graphic organiser was provided with an explicit explanation), indicated all three of the students (with varied capacity to SRL) showed positive improvement in writing development as well as improved on-task time. It was inferred that the explicit and meaningful explanation of how the scaffolding was to be used, provided the students with an adequate level of support to meet the challenge of learning how to write a well-structured text.

The above-mentioned finding is consistent with a study by Zumbrunn and Brunning (2013) who revealed that appropriate scaffolding is the key to the Self-Regulated Strategy Development (SRSD) model of instruction. In their research, the teachers taught students to use a mnemonic that assisted them to recall seven essential story components. It was concluded that the SRSD intervention seemed to add and clarify understanding of story schema, and overall, appropriate scaffolding can meet the needs of first grade writers. Similarly, research conducted by Donovan and Smolkin (2002) showed that too little or too much scaffolding can hinder children in demonstrating their full range of genre knowledge. In addition, research by Molenaar and Chiu (2014) provide evidence that effective structuring of scaffolds increases students’ metacognitive activities and high cognition.

Although research studies recognise that scaffolding as a notion commonly represents the nature and quality of support that a teacher provides students during instruction (Hammond & Gibbons, 2005; Mercer & Littleton, 2007), scaffolding can also be considered from the perspectives of autonomy and dependence with two parallel concepts – challenge and support (Mariani, 1997; Wilson & Devereux, 2014). Interpreting the theory of scaffolding as a balance between high challenge - high support offers ‘rich potential’ to the notion of scaffolding (Wilson & Devereux, 2014). From this perspective, providing an adequate level of support (i.e. to the degree that the challenge is maintained) is the key to supporting students to become independent learners. The key is to achieve and maintain a level of balance between challenge and support and by doing so, the learner’s autonomy is promoted by the manner in which tasks are designed and managed, and the way the teacher interacts with learners (Mariani, 1997; Wilson & Devereux, 2014). As reported in chapter 5, when the teachers systemised the learning,
engaged the students in peer-supported learning and scaffolded the instruction, their students were supported to manage the challenge of developing an understanding and knowledge of writing.

As previously stated, challenges in learning are necessary for students to engage in strategic regulation of learning. Research shows that challenge episodes encourage students to regulate their learning (Hadwin, 2013; Hadwin et al., 2011). Nevertheless it is argued that for students to engage in strategic regulation of learning so as to overcome challenge, depends upon whether the challenge is manageable (Mariani, 1997; Wilson & Devereux, 2014). Providing students with effective scaffolding is one way of transforming a learning challenge into a manageable challenge but for this to happen, scaffolded learning tasks need to be well structured and the students need to know how to use the support provided, otherwise these attempts may mislead performance (Malmberg et al., 2014).

The above discussion proposes the notion that socially-structured learning processes supported the students to SRL. First it was proposed that a combination of pedagogical procedures was implemented to systemise the learning process so it became more transparent; therefore transforming a challenging process into a manageable one so the students could engage in the instruction. Then it was suggested that students were encouraged to participate in peer-supported learning, to engage them in co-regulated learning and finally it was argued that instruction was scaffolded to engage students in a challenging and supportive learning process. Overall, it has been argued that these Socially-structured processes support students to engage in SRL by transforming the challenge of learning into manageable challenge.

**Metacognitive Regulation of Learning Supports SRL**

In this next section, it is suggested that the teacher participants supported their students to engage in SRL by prompting them to use metalearning strategies. By doing so, the teachers prompted the students to think about their own learning and to connect this thinking to actions that engaged them in their learning strategically (Jackson, 2004). This claim is supported by discussion of literature and research grounded in the notion of metacognition and SRL.

Scaffolding does not always require direct human assistance as acknowledged by Palincsar (1998), activities including research tasks can be classified as scaffolding. This was
evident during this investigation when teachers were requested to implement the microanalytic observation protocol. To enable the researcher to examine SRL as a dynamic process, it was requested that the teachers ask their students short, probing questions focused on goal setting, self-regulatory processes such as strategy planning, strategy use and reflection, with the intention of gaining information about the student’s self-regulated thoughts, feelings and behaviour (DiBenedetto & Zimmerman, 2013; Zimmerman, 2008). Following the analysis of interview data and observation data, it was recognised that this questioning process prompted the teachers and the students to engage in metacognitive regulation of learning and it is argued that this supported the students to engage in metalearning strategy use and in turn, supported them to engage in SRL.

Research recognises that metacognitive regulation is necessary for learning, whether it be learning to write or learning to SRL (Bryce et al., 2015; Hacker et al., 2009). Research by Bryce et al. (2015) investigated the relationships among executive functions, metacognitive skills and educational achievement in five and seven year-old children. It was revealed that metacognitive skills were the most important predictors of educational achievement across both age groups. According to Hacker et al. (2009), writing is applied metacognition, they state that ‘Writing is the production of thought for oneself or others under the direction of one’s goal-directed metacognitive monitoring and control, and the translation of that thought into external symbolic representation’ (p. 154). It is well recognised that during SRL, students need to engage in a variety of metacognitive processes including planning goals and strategies as well as reflection and evaluation of learning in relation to their changing learning context (Azevedo et al., 2012; Cleary & Zimmerman, 2012; Fadel, 2014; Fadel et al., 2015; Winnie, 2014b; Zimmerman, 2000; Zimmerman & Labuhn, 2012).

Evidence reported in chapter 6, supported the notion that it is important to teach students to use metacognitive strategies in order to engage them in SRL. The findings indicated that students require explicit support to use metalearning strategies, ideally formed around a personal learning cycle (including setting learning goals, planning strategies, using strategies and reflection). During this study, analysis revealed that when students were not supported by a process to support personal goal choice they tended to choose goals relating to the LI/SC, suggesting sharing LI/SC influenced personal goal choice. Nevertheless, in some cases these
choices were made without a full understanding of the intent behind the LI. When students chose a goal not relating to the LI/SC, the students tended to hold onto a goal that they had already achieved and which was no longer relevant to their development and not necessarily connected to the learning focus. Research has shown that children demonstrate higher levels of metacognitive knowledge when supported by a teacher, suggesting that adults might take over or at the very least, share the regulatory role when working with young children (Perry & Rahim, 2011). Current research in metacognition and SRL shows that metacognition prompts can foster SRL by inducing regulatory activities, which, in turn improves learning outcomes (Sonnenberg & Bannert, 2015). In contrast, research findings provide the warning that students who already have the capacity to use cognitive strategies can show adverse reactions to explicit instruction in SRL processes (Ee, Moore, & Atputhasamy, 2003; Moos & Ringdal, 2012).

During this study, an analysis was conducted to investigate if sharing LI/SC supported students to set goals relevant to their learning, and to plan and use effective strategies. The LI/SC set for terms two and three writing lessons were compared with the focus of students’ set goals, planned strategies and strategy use. The findings indicated that, regardless of student goal choice and strategy focus (of which there was a variety), the students were capable of achieving the SC set them, to at least to some degree. This analysis also revealed that the students who chose goals or strategies unrelated to the SC tended to choose goals that observations indicate were not either developmentally suitable or achieved. This suggest that choosing goals and strategies to match SC supported the students to choose goals that were relevant to the focus of their learning and more likely to ensure they chose goals relevant to their developmental requirements.

It has long been recognised, that learning is an active process that requires students to think about their thinking (Miller et al., 1970) and recently, that the students who use metacognitive strategies are successful in school (Sonnenberg & Bannert, 2015; Tuysuzoglu & Greene, 2015; Wilson & Bai, 2010). By engaging in metacognitive regulation of learning, students can plan their learning, evaluate whether they understand what they are learning, and adapt their efforts as and when required. Nevertheless, it is believed that younger children’s immature executive functions may limit their metacognitive skill use which is why they need prompting and scaffolding to use metacognitive skills (Bryce et al., 2015). Evidence reported in chapter 6
supports the notion that having a goal and a strategy in mind prior to beginning writing provided the students with a possible solution if/when they reached a learner’s block. However, the teachers acknowledged that although it was the students’ responsibility to pre-plan goals and strategy use, it was the teachers’ responsibility to prompt their students to plan. The teachers further acknowledged that they needed to remind students more frequently to think about what strategy they are going to use so it is forefront in their thinking.

Dimmitt and McCormick (2012) aptly state, ‘Metacognition strategies require a level of consciousness not just about what is being learned but also about how it is being learned and an awareness of having learned it’ (p. 157). This endeavour is very challenging for young learners so not surprisingly, following a review of literature on metacognition in learning, Veenman et al. (2006) identified successful metacognitive instruction requires the following fundamental principles:

a) embed...metacognition instruction in the content matter to ensure connectivity,

b) inform...learners about the usefulness of metacognitive activities to make them exert the initial extra effort, and

c) prolonged training to guarantee the smooth and maintained application activity (p.9).

Evidence from this investigation suggests that overall, the teacher participants were inconsistent with how they embedded metacognitive instruction into their lessons. One analysis showed that teachers were inconsistent in their questioning of students about strategy planning and strategy use. Collectively, the teachers consistently asked what goals had the students set just prior to beginning writing, and towards the conclusion of the lesson, they consistently prompted the students to reflect on their performance. In contrast, the teachers were inconsistent with asking the students if they had planned a strategy to help them achieve their goal, and on completion of writing, what strategy did they use to achieve their goal (thus supporting the feedback loop). Research shows that although teachers recognise the usefulness of explicit SRL strategy instruction, its occurrence in classrooms is rare (Kistner et al., 2010). Winnie (2014a) claims that from his experience, learners are rarely equipped with a variety of options, tactics and strategies for carrying out learning and so have to develop independently a capacity to SRL. It was considered during this investigation, that perhaps the teachers’ inconsistent demonstration of
explicit teaching of regulatory skills was either due to their low level understanding of the importance of metacognitive regulation of learning, or how it can be supported. Wilson and Bai (2010) investigated teachers’ understanding of metacognition and their pedagogical understanding of metacognition, including the nature of what it means to teach students to be metacognitive. The results revealed that the teachers who did have a rich understanding of metacognition believed that teaching students to be metacognitive entails a complex understanding of both the concept of metacognition and metacognitive strategy use.

Following the analysis of microanalytic observation data (focused on the students’ reflections about their writing performance), it was thought that students could be guided in self-evaluation by teachers prompting them to reflect on their learning. Findings indicated that when prompted, Year 1 writers appeared well capable of self-evaluating how they felt about their writing, mostly expressing positive sentiments and reasoning. In addition, the data indicated that a strong majority of self-evaluations were guided by the students’ personal goals or the focus of LI/SC set by their teachers, suggesting self-evaluation can be guided by teachers sharing LI/SC.

Chapter Summary

In this chapter, it was proposed that three core learning processes identified during this study, supported students to engage in SRL. The discussion included how each process functioned to support Year 1 writers to engage in SRL, and was informed by findings presented in chapters 4 through to 6 as well as leading theory and research. It was proposed that each core-learning process performed different functions in support of SRL. Next in Chapter 8, a synthesis of the findings is presented along with the propositions that support the substantiated theory proposed in Chapter 9.
Chapter 8: A Synthesis of Findings

This chapter extends the argument and analysis of findings to answer the primary research question, *How were Year 1 writers supported to engage in self-regulated learning?* and to address the subsidiary research questions listed below.

1. What practices and processes did teachers use to support Year 1 writers to engage in SRL?
2. Why did teachers use these practices and processes to support Year 1 writers to engage in SRL?
3. What strategies did Year 1 writers use to self-regulate their learning?
4. How did teachers change practices to support students with varied capacity to engage in SRL?

These research questions were largely satisfied by the findings presented across Chapters 4, 5 and 6, and the conceptualisation of the findings discussed in Chapter 7. In the first section of this chapter, an overview of the core learning processes identified during this investigation is presented. In the next two sections, the discussion of the findings is extended by presenting two separate synthesised perspectives of these findings in an attempt to explain how the students from this study were supported to engage in SRL. Related theory and research was considered so is also included in the discussion.

The chapter concludes with a summary.

Summary of Core Learning Processes

From this study, it was proposed that Year 1 writers could engage in SRL when supported by three core learning processes:

- An intentional learning process
- Socially structured regulation of learning
- Metacognitive regulation of learning.

Supporting evidence for these learning processes has been presented as well as discussion of how each process functioned differently to support students to engage in SRL (an overview of this discussion is presented below in Table 8.1 which lists the title, a brief definition, the function and the potential impact of each of these core learning processes).
Table 8.1 How Processes Can Support Students to Engage in SRL

<table>
<thead>
<tr>
<th>Core learning process</th>
<th>Function</th>
<th>Impact on students</th>
</tr>
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<tbody>
<tr>
<td>An intentional learning process: When learning is regulated with formative assessment, monitoring and feedback practices</td>
<td>• focusing and clarifying student understanding</td>
<td>Promotes:</td>
</tr>
<tr>
<td></td>
<td>• guiding self-assessment and use of a feedback loop</td>
<td></td>
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<tr>
<td>Socially-structured regulation: When learning is regulated with practices in which others (e.g. teachers and/or peers) share regulatory control of the learning</td>
<td>• systemising learning</td>
<td>Promotes:</td>
</tr>
<tr>
<td></td>
<td>• engaging students in peer-supported learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• scaffolding of learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metacognitive regulation of learning: When learning is cognitively processed through a cycle of metalearning strategies</td>
<td>• prompting metacognitive processing</td>
<td>Promotes:</td>
</tr>
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</table>

In the discussion that follows, it will be proposed that when the three learning processes outlined in Table 8.1 are integrated, a synergy of learning is created when the separate functions align. It is suggested that this alignment of supporting practices can support Year 1 writers to engage in SRL, including those with varied capacities to SRL. The section immediately following presents data from this study to provide support for this proposition. Then the proceeding chapter sections serve to elaborate upon this notion by illustrating a further two examples of how an alignment of the learning processes can result in a synergy of learning.

Aligning Core Learning Processes

The findings suggest that for young students to appropriate SRL skill development, a systematic and comprehensive approach to designing and providing support is required. Fredricks et al. (2004) proposed that the engagement of students could be measured by considering students’ emotional, behavioural and cognitive indicators. According to Zimmerman and Labuhn (2012), the degree to which a learner is motivationally active, metacognitively active and behaviourally active, determines whether a student is truly a self-regulated learner. The findings from this current study propose that for a student to be active on these three levels requires the synchronisation of a set of processes that can function together to guide a student’s actions, thought processes, and interest. It is this alignment that creates a synergy that supports students to engage in SRL. The competence, motivation and understanding required for students
to engage in SRL can be supported by specific core learning processes each addressing these needs via different sets of practices. The alignment of these three core learning processes into one coherent process, provides the optimal support necessary for students to engage in SRL.

Next, discussion serves to illustrate the above-mentioned proposition with evidence from this study and supporting literature. The extract from the observation data presented below, illustrates how a teacher participant supported her students to engage in SRL by creating a synergy of learning, interrelating the core learning processes listed above. On this occasion, the teacher systemised instruction using a combination of evidenced-based pedagogical procedures led by LI/SC that were focused on writing concepts associated with the pedagogy, and used questioning prompts to engage her students in metalearning strategy use. The whiteboard display and the completed graphic organiser presented below in Figure 8.1, along with transcribed notes of a lesson observation, represent how the teacher participant Adele, synchronised all three core-processes to support her students to engage in SRL.

While directing attention to a wall display outlining the writing process (plan – draft - revise) and a completed plan, Adele asked the students what had they been using to help them with their writing. When a student said, “The writing process” she asked, “Yes but what part of the process? What do we call this?” as she pointed to a planner/graphic organiser. A student then acknowledged they had been using a plan. Adele then asked what part of the writing process had they worked on the day before, a student said they had written a plan. She then asked them what parts made up the plan. Pointing to the organiser designed to support plan writing Adele asked a series of questions to guide them with how to use the planner. Adele then directed the students’ attention to the focus of the day’s writing session by saying, “Your task today is to finish your plan and then you will begin your draft. What does draft mean? What do you do when you write a draft? Where do we get our information for our draft? Do we use our plan?” A student says, “We use our plan.” “Do we go back and get our really rich words from here… or do we just throw that in the bin?” (Adele pointed to the planner). A student confirms that they get their words from the planner. Adele then models writing a wondering (the final section of the planner). She then modelled writing a first draft (see Figure 5.7). She mentions the importance of a title and an introduction providing a “sizzling start” so that the reader wants to continue reading. She tells the students it is important to reread what you have written so you can fix up mistakes. She invites a student to correct an error with her title (a failure to use a capital letter). Adele winds up the introduction by asking, “What are you going to do today?” A student said, “We have to finish our plan and then reread it”. (Adele, observation term 2)

At the beginning of the lesson introduction, Adele illustrated the intended learning by drawing attention to a wall display showing the phases of the writing process (plan-draft-revise) and then to a completed plan (see Figure 8.1 presented below) that was displayed on the whiteboard. She
asked her students to talk about the strategy they had been using to help them with their writing. She continued to ask a series of probing questions to prompt them to think this through further and to identify the writing process as the strategy they will need to use to support their writing and then directed their attention to the intended learning by stating,

“Your task today is to finish your plan and then you will begin your draft”.

Figure 8.1 Photo of Adele’s Lesson Introduction on the Writing Process

Adele then proceeded to ask questions to ensure the students understood the significance of the process writing approach strategy, including how they could apply it to their writing. Then she reinforced this knowledge by modelling the process she wanted them to apply (i.e. to use the plan to support the writing of a draft). In addition, she referred to and briefly modelled the next phase of the writing process (editing). Lastly, before concluding the whole group/teacher-led lesson introduction and before sending the students to begin writing, she asked the students to restate the focus of their learning. This extract demonstrates many practices discussed across Chapters 4, 5, 6 and 7. This includes using modelling to provide a powerful lesson introduction, sequencing prompting questions to orientate understanding, clarifying the learning with a learning
intention, the use of pedagogical procedures such as a writing process and genre writing approach, and the use of genre-focused graphic organisers to scaffold the writing.

Following this lesson introduction, Adele’s students worked in small groups to write their plan before beginning their draft. Their writing of plans was supported by a graphic organiser designed with clear visual prompts to scaffold their understanding of descriptive writing. Adele proceeded to conduct an interactive writing session with one of the groups. During this session, Adele was seen providing differentiated support to the students. This was commented upon during the interview that followed; extracts from the interview are presented below.

*David needed a little bit more support … I had to prompt him more to get the ideas so he needed to really vocalise them. He needed that stage of oral language and then recording it. He got there. He had a good try but I think he really would not have achieved as much if I hadn’t been there with him.* (Adele, teacher interview term 2)

*Eve is very independent. She doesn’t need huge amount of prompting. She has got a really good vocab which is showing. I prompted her once or twice to get a little extra information and she responded really well to that, and she knew how to use the scaffolding plan.* (Adele, teacher interview term 2)

To support the students to engage in SRL, Adele occasionally asked the students short, probing questions focused on goal setting, self-regulatory processes such as strategy planning, strategy use and reflection, with the intention of gaining information about their self-regulating thought processes. Evidence reported in chapter 6 indicated this supported the students’ metalearning strategy however overall, observations indicated that teachers were inconsistent with asking students what strategies they intended to use, and later what strategy helped their performance (despite their acknowledging to do so would support SRL).

The extracts presented above describe practices observed to support the students to engage in SRL and that were presented as evidence in chapters 4 through to 7. This includes:

- providing a clear learning intention to clarify and focus the learning
- using modelling to provide a powerful lesson introduction
- sequencing prompting questions to support understanding
- implementing pedagogical procedures such as the writing process approach and genre writing approach to both systemise the learning process and to enable understanding
- using genre-focused graphic organisers and wall displays to scaffold the writing.
• asking the students short, probing questions focused on goal setting, self-regulatory processes such as strategy planning, strategy use and reflection, with the intention of gaining information about their thought processes and prompting them to use metalearning strategies.

Although these practices were observed on other occasions during the study, it became evident that only when these practices were explicitly aligned, as was the case in this example, was a synergy of learning supporting engagement. Together, these practices and processes demonstrate how students can be assisted to engage in SRL by synchronising core-learning processes into one comprehensively designed learning process. When this synergy was present, the students appeared more capable of self-regulating their learning. This was evident when they:

• continued writing for longer periods of time
• independently shifted their writing from a plan to their first draft
• improved their writing performance (measured by the Writing Analysis Tool)
• used the scaffolding tools effectively
• stated learning goals that were relevant to their learning needs
• could suggest strategies to assist their writing performance
• were seen using strategies that were relevant to their learning needs
• were able to suitably reflect upon their performance by stating what they did to improve their writing.

The comprehensive support provided to students guided their progress through the levels of regulatory skill required to SRL. The practices described in the extracts presented in this chapter, align well with the social cognitive model of the development of self-regulation presented below in Table 8.2 (Schunk & Zimmerman, 2007; Zimmerman, 2002). This model shows how the development of SRL progresses from modelled demonstration (imitative performance supported with modelling and social assistance) to guided practice (independent performance supported with structured conditions) to independent practice of self-regulation (Schunk & Zimmerman, 2007).
Table 8.2 Levels of Regulatory Skill

<table>
<thead>
<tr>
<th>Level</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Observation</td>
<td>Vicarious induction of a skill from a proficient model.</td>
</tr>
<tr>
<td>2</td>
<td>Emulation</td>
<td>Imitative performance of the general pattern or style of a model's skill and social assistance.</td>
</tr>
<tr>
<td>3</td>
<td>Self-control</td>
<td>Independent display of the model's skill under structured conditions.</td>
</tr>
<tr>
<td>4</td>
<td>Self-regulation</td>
<td>Adaptive use of skill across changing personal and environmental conditions.</td>
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</tbody>
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It is evident that the first two levels (i.e. observation/emulation) rely primarily on social factors, whereas the second two levels (self-controlled/self-regulation) depend on influence by the learner (Schunk & Zimmerman, 2007) thus reflecting a shift of control from expert to learner. This model highlights the notion that students require ‘proficient modelling’, ‘social assistance’ ‘structured conditions’ before they can be expected to use ‘adaptive skills’ (requiring metacognitive regulation) and thus engage in SRL.

The evidence presented above, also demonstrates that it is through language that students interact with others when sharing the regulatory control of their learning and most importantly, how important language is to learning to write (Christie, 2005; Derewianka & Jones 2012). It is through social interaction that meaning is negotiated and how young children are afforded the opportunity to experience various conceptual shifts required for them to progress towards writing proficiency (Clay, 2001). This evidence also highlighted that it is important for students to understand that writing is a process reflective of the phases presented in cyclical SRL models (plan-perform-reflect) so they understand how and why they need to plan before writing a draft and to consult that plan when writing their draft and then to edit their writing both during and after draft writing. It is also important that teachers make the language demands of the curriculum explicit by teaching the notion that key genres/types of writing have a specific purpose, structure and must include relevant language features (Derewianka, 2015). In addition, students need to use a metalanguage that enables them to talk about and reflect upon language choices in texts because ‘classroom talk can potentially provide scaffolding to students as they learn new language and new knowledge’ (Christie, 2005, p. 44). Finally, these extracts also illustrate how
teachers can prompt students to engage in metalearning strategy use so they reflect on and evaluate their learning.

**Aligning formative assessment, scaffolding and metalearning.** During this study, a further example of when learning processes combined to form a synergy of learning was when the implementation of formative assessment strategies, instructional scaffolding and use of metalearning strategies aligned to support students to engage in SRL. It was evident that the scaffolding provided to students was more likely to transform the learning into a manageable challenge when: it was designed specifically to match the intention of the learning, and when students were supported to engage in feedback to reflect upon when and how to use the scaffolding effectively. Supporting students to reflect upon how instructional scaffolding supported their learning (an example of metalearning strategy-use), enabled them to gain some control of their thinking, an essential component of SRL (Clark, 2012). This is reflected in the cyclical nature of SRL models that are dependent upon feedback during reflected efforts to learn (Zimmerman & Labuhn, 2012).

Extant research recognises that learning needs to be challenging for students to engage in strategic regulation of learning (Hadwin, 2013; Hadwin et al., 2011), but the challenge must be conceivable to prevent frustration (Hammond, 2001; Mariani, 1997; Wilson & Devereux, 2014). During this study, it was evident that by aligning the supporting components from each of the core learning processes, the students were supported to recognise how to manage the challenges of new learning. This alignment was evident when the intended learning was focused and clarified with LI/SC, followed by modelling of how to use a scaffolding tool or process strategically; and when, at the conclusion of the lesson, questioning prompts were used to support students to reflect upon the effectiveness of the scaffolding used. Thus it was concluded, that for scaffolding to support students with the challenge of learning, it must be designed specifically to match the intention of the learning and for students to be supported to engage their feedback loop so they can reflect upon, when and how to use scaffolding. As Hadwin (2013) states, ‘successful learners regulate only when they judge it is needed’ (p. 213) but it is argued here that young learners require support to make these judgements effectively.

**Designing a formative assessment processes to facilitate metacognition and use of scaffolding.** Evidence reported in Chapter 6, revealed that focusing and clarifying learning
with LI/SC, feedback, prompts, instructional scaffolding and sequenced questioning (to engage students in metalearning strategy use), supported the students to engage in goal planning, strategy-planning/use and reflection. This promoted connection making, purposeful learning and transference of learning (Fadel et al., 2015; Silver, 2013; Spruce & Bol, 2015). It is therefore proposed that implementing formative assessment (FA) practices that facilitate metalearning strategy use (including goal setting, strategy planning and use and reflection) and effective use of instructional scaffolding, supports students to engage in conceptual thinking, procedural thinking, reflection and connection making, all of which support students to SRL.

It is proposed that combining an intentional learning process with metacognitive regulation of learning and socially-structured learning processes creates opportunities for students to engage in an assessment and learning partnership, which is where support for SRL logically begins (Black, 2015; Clark, 2012). It became evident during this investigation that aligning core-learning processes assisted the students to focus and clarify their learning with LI and SC, and to be prompted to engage in a feedback loop so reflection and evaluation of strategy use and performance would occur. It was also proposed that this process supported the students to make strategic decisions for their future learning. From this perspective, FA became a cognitive tool that supported students to make important connections within and between learning opportunities (Clark, 2012). By combining the assessment and learning processes with metacognition, assessment could be used for the adaption of instruction, thus catering effectively for the needs of the students (Black, 2015; Black & Wiliam, 1998; Clark, 2012; Wiliam, 2014).

Previous discussion has focussed on how supporting students with instructional scaffolding, prompting the use of metalearning strategies and facilitating learning with FA practices can all individually promote SRL. However, it is argued that these practices must align to engage students in an assessment and learning partnership that can support young students to engage in SRL adequately. This need for alignment can be explained as follows. Assessment needs to be formative to diagnose what learners need (Wiliam, 2014); diagnosis is necessary for contingency (Smit et al., 2013; Wood, 2003); contingency is central to scaffolding (Van de Pol et al., 2012) and effective scaffolding increases students’ use of metacognitive activities and their level of cognitive processing (Molenaar & Chiu, 2014; Molenaar, Chiu, Sleegers, & van Boxtel, 2011).
A study conducted by Spruce and Bol (2015) investigating teacher beliefs, knowledge, and practice of SRL identified the need for continued professional development in SRL strategies and their application to practice. A core finding was that instruction in metacognition must be carefully designed so it influences teacher personal practice. As was evident in this investigation, when students were supported to engage in metalearning strategy use and specifically in reflection, their understandings from one lesson could be shared, displayed and then used to plan for the next lesson and then revisited at the beginning of the next lesson so connections were made, and learning could be transferred.

Results from meta-analysis research by Dignath et al. (2008) confirm the importance of combining metacognition with other core-learning processes. Their meta-analysis of 48 studies taken from 30 articles on the effectiveness of self-regulatory training with primary school students revealed that intervention studies that combined social/constructivist and metacognitive theories, by far displayed the largest effect size (1.44) when compared to interventions with other combinations. For example, interventions based on social/cognitive/constructivist theories had an effect size of (0.95), the interventions based on motivation theories exerted the smallest effect size (0.33) and interventions based on metacognitive theories alone were medium in their effect size (0.58). Interestingly, when Dignath et al. (2008) noted implications for future research, they stated:

Analyses of how teachers can be trained are needed to fill the knowledge gap of implementing training programmes by teachers in the classroom. The focus on the learner must be expanded by the impact of teacher behaviour on learning processes. (p. 122)

These findings support the proposed notion that core learning processes can be designed and implemented by teachers to support students to engage in SRL particularly processes that reflect social/constructivist and metacognitive theories.

Chapter Summary

From this evidence and analysis, it was proposed that young students (despite their capacities to SRL) can be supported to engage in SRL when the learning process is made transparent for all students. It was suggested that instruction be designed by focusing formative assessment practices (LI, SC, enabling prompts and feedback) with concepts and scaffolding practices associated with evidenced-based writing pedagogy, and implementing these practices
explicitly to support students to engage in intentional learning, socially structured learning, and metalearning strategy-use - ideally before, during and after writing. It was argued that when the three core learning processes identified in this study are combined and suitably aligned, they function to provide a transparent learning process that provides students with a synergy of learning. It was suggested that it is this synergy that can support Year 1 writers to engage in SRL. Next, in the final and concluding chapter, the key findings and conclusions are presented. The limitations of this study are discussed as well as possible contributions. Some researcher reflections conclude the thesis.
Chapter 9: Conclusion

This chapter draws together the key findings and presents conclusions in response to the research questions that underpinned this investigation. To begin, a summary of the research is presented including the conclusions and how they relate to leading literature. Then the limitations of this study are discussed, followed by a discussion of the professional practice and policy implications possible as an outcome of this research. Researcher reflections conclude this chapter.

Summary of Research

The primary research question for this investigation was How were Year 1 writers supported to engage in SRL? The subsidiary research questions included:

1. What practices and processes did teachers use to support Year 1 writers to engage in SRL?
2. Why did teachers use these practices and processes to support Year 1 writers to engage in SRL?
3. What strategies did Year 1 writers use to self-regulate their learning?
4. How did teachers change practices to support students with varied capacities to engage in SRL?
5. How did students with varied capacities to engage in SRL, respond differently to supporting practices?

This study was designed to extend the body of knowledge surrounding how young writers can be supported to engage in self-regulated learning (SRL). A case study design was implemented to investigate the phenomenon under investigation and constructivist grounded theory method was selected to structure the collection, analysis and organisation of data. Participants included three teachers and nine Year 1 students. A literature review identified potentially related issues and topics, which included key ideas from Sociocultural Theory; Self-regulated learning; formative assessment and how young students learn to write.

The analysis of findings revealed that the teacher participants used specific processes and practices to support their students to engage in SRL. The potential impact of this support on the students was considered including the strategies the students adopted and how these promoted their capacity to engage in SRL. This discussion included consideration of how the
teachers changed these practices to support students with varied capacities to SRL as well as how students with varied capacity to SRL responded to supporting practices.

It was proposed that the supporting practices observed being implemented by the teachers could be suitably defined as three core learning processes that support students to engage in SRL. This evidence identified the specific practices that the teacher participants were observed using and included how teachers described the support provided to assist their students to engage in SRL. These core processes were labelled as follows:

- An intentional learning process
- Socially structured regulation of learning
- Metacognitive regulation of learning

Each of chapters 4, 5 and 6 was dedicated to presenting evidence for one of these three core learning processes to illustrate how the categories were constructed.

In Chapter 7, to extend these findings and to address the subsidiary research questions, the findings were compared to extant research and theory to explore how the core learning processes function and impact on how students engage in SRL. The overall conclusion was that although each process identified supported Year 1 writers to engage in SRL, each process functioned differently. The impact of these learning processes was also discussed. In Chapter 8, to begin the construction of a substantive theory, a synthesis and conceptualisation of the findings was presented. It was proposed that teachers can support Year 1 writers to engage in SRL by implementing three interrelated learning processes, each strategically designed to support students to engage in SRL (despite students’ varied capacities to SRL). It was suggested that this support is strengthened and apparent to the learners when these processes function together to provide a synergy of learning. It was claimed that a synergy of learning can support young learners with varied capacities to SRL, to engage in SRL.

Concluding Findings

A final attempt to conceptualise the findings is presented as a substantiated theory. The first conclusion is that Year 1 writers can be supported to engage in SRL when supported by the three core learning processes identified during this study. The findings suggested that an intentional learning process was being implemented by teachers to focus and clarify student understanding and to guide them to engage in self-assessment and use of their own feedback.
loop. It was proposed that this process functioned to support intentional learning by providing opportunities for purposeful learning, conceptually focused learning, self-assessment and connection making. It was also suggested that *socially structured regulation of learning* was evident. It was thought that this learning process was implemented by teachers to systemise the learning process, to engage students in peer-supported learning and to scaffold learning. It was proposed that this process functioned to provide opportunities for challenging but manageable learning, co-regulated learning and scaffolded learning. The third supporting learning process was labelled *metacognitive regulation of learning*. It was suggested that the teachers implemented this process to prompt students to use metalearning strategies such as goal setting, strategy planning/use and reflecting upon learning and thus it was proposed that this process functioned to support students to use metalearning strategy-use.

The second conclusion from this study was that the three core learning processes identified in this study can be interrelated to support Year 1 writers to engage in SRL and when suitably aligned, provide an overall transparent learning process, providing students with a synergy of learning. It was suggested that this synergy heightens the individual impact of each process creating a clarity of learning by illuminating potential targeted moments for teachers to teach and for students to learn how to learn. It was identified that the students were able to learn how to learn when the teachers focused, clarified and connected the learning for them, and provided supporting processes that revealed to them optimal opportunities for planning, self-monitoring, reflection, and evaluation of learning.

It is therefore proposed that the following statement can serve as a design principle for planning instruction to support students to engage in SRL.

*Young writers can be supported to engage in SRL when the learning process is made transparent. This can be achieved by:*

- *focusing formative assessment practices (LI, SC and feedback) with concepts and scaffolding practices associated with evidenced-based writing pedagogy, and*
- *implementing these practices explicitly to support students to engage in intentional learning, socially structured learning, and metalearning strategy-use (e.g.*
prompting students to set goals, plan strategies, use strategies effectively and to reflect upon their learning).

The conclusions presented above broadly reflect those notions expressed by researchers and theorists who write about SRL. It is commonly understood that SRL is a meta-process dependent on students’ active engagement across loosely connected phases of learning, namely before, during, and after learning (Clark, 2012; DiDonato, 2013). As discussed in chapter 2, SRL models commonly propose that students engage in metacognitive, motivational and behavioural processes to regulate their learning (Winnie & Perry, 2000; Zimmerman, 1990). In addition, there is literature linking metacognition (Azevedo et al., 2012; Cleary & Zimmerman, 2012; Winnie, 2014b) and formative assessment (Clark, 2012; Wiliam, 2014) directly with the findings from this study. However, this study extends SRL literature by proposing that SRL can be viewed from a pedagogical perspective designed around interrelated but differentiated core learning processes each strategically designed to support students to engage in SRL. To further this pedagogical notion of SRL, it is proposed that these processes need to be aligned so a synergy of learning is created in the form of a transparent learning process that promotes SRL. In addition, this study supplements advice to support students to SRL in the early years of schooling, with particular focus on writing, as most research of this nature has been conducted with students in the upper primary grades through to college Years (DiDonato, 2013; Dignath et al., 2008; Perry, Nordby, & VandeKamp, 2003).

Methodological Limitations and Contributions

In the previous discussion, a synthesis of the findings from this study was presented. This serves as a proposed theory based on interpretation and therefore is open to conjecture. Next, these conclusions and the overall study design are evaluated. This discussion highlights those areas of the study where limitations prevented stronger and more generalised conclusions. The possible implications from these findings are discussed and suggestions for where additional research could extend the findings from this investigation are considered.

The discussion that follows is structured around Charmaz’s (2014) criteria for evaluating the quality of CGTM research. These four distinct criteria include credibility, originality, resonance and usefulness. Using these criteria to analyse the findings, allowed me to ‘account for the
empirical study and development of theory’ (Charmaz, 2014, p. 338). Similarly, Corely and Gioia (2011) recommend that theoretical contributions be assessed from a perspective of originality and scope (scientific and pragmatic usefulness), in order to ‘enhance theoretical relevance to practice and our sensegiving potential to the wider audiences’ (p. 29). Although each criteria is discussed separately it is necessary to be mindful that these notions are ultimately interrelated.

Credibility. The credibility of research refers to the congruence between the findings and reality, and scrutinises how data was collected, interpreted and analysed (Charmaz, 2014; Merriam, 2009; Urquhart, 2012). In chapter 3, it was acknowledged that method choice should unmistakably be guided by the problem being investigated and its circumstances (Flyvbjerg, 2006). Consistent with an interpretative approach to research using CGTM, this investigation was contextually situated in time, place and culture (Charmaz, 2014). Cognisant that grounded theory is ‘a perspective based methodology and people’s perspectives vary’ (Glaser, 2012a, p. 2), it is acknowledged that there are limitations as to how far the claims from this investigation extend.

The methodology used for this study has enabled the researcher to gain rich insights in to how the teachers supported their students to engage in SRL. Although small in representation, the number of participants in this research is indicative of case study methodology and CGTM (Charmaz, 2014; Creswell, 2008). This investigation was conducted with three teacher participants and nine student participants therefore, as such, close examination of potential phenomena was made possible. However, this small sample means the findings are restricted to the investigated context and those who participated.

Credibility was provided to this study through a well-prepared and carefully planned CGTM approach to research. When queries and insights emerged during each phase of the analysis, research methods could be applied to follow leads, enabling the analysis and method of analysis to be constructed simultaneously, systematically and in response to a strong use of logic (Charmaz, 2008, 2014). Furthermore, the headings and sub-headings presented in chapters 4 through to 8 provide links to track the application of logic and analysis. Further, in chapter 4 through to 8, the data have been woven throughout the discussion of findings to provide clear evidence for the claims made for each core category (including how they relate), therefore providing clear documentation for further scrutiny.
Originality. Using ‘originality’ to evaluate findings is to determine whether they provide insights that either provide an incremental advancement or reveal a new way of understanding (Corely & Gioia, 2011). A review of the literature indicated that fresh perspectives and approaches to how students are supported to learn was warranted. Although the limitations associated with this study first prevent the findings from being broadly generalisable, it is possible to propose new perspectives related to how Year 1 writers can be supported to engage in SRL. Until now there has been limited research into SRL as an event that happens in real time in authentic classroom settings particularly research that examines how co-regulated learning leads to SRL or how young writers acquire SRL skills (Lau et al., 2015; Perry & Rahim, 2011). It is proposed that because this study was conducted in real time, with real teachers and learners in a real classroom, it seems reasonable to claim that both the context and the focus of this investigation was original and therefore the findings from this study do extend this body of knowledge.

The conclusions from this current study propose that teachers can support students to engage in SRL by designing and interrelating three supporting learning processes to address the complex needs of students who are expected to engage in SRL. It is acknowledged that, although each of the three core-learning processes identified may not individually reveal entirely original insights, the originality lies in the notion that each process can contribute collectively to create a synergy of learning that supports young writers to engage in SRL. The realisation that a synergy of learning can engage young learners in SRL and that interrelating three specific core learning processes can create this synergy, sets this study apart from previous research.

The methodological procedures designed for this study add to the body of methods used to study SRL thus contributing to methodological considerations. To provide information specific to the focus of the phenomenon under study, an observation form and associated questioning protocols, were designed to structure and analyse how the students engaged in SRL. This observation and questioning was designed using SRL microanalytic methodology (Cleary & Zimmerman, 2001; Kitsantas & Zimmerman, 2002) with the aim to investigate the role of students’ motivational feelings, beliefs and actions, when initiating and sustaining changes in their SRL. Although microanalytic methodology is recognised to have strong predictive validity (DiBenedetto & Zimmerman, 2013), until recently, research using a microanalytic approach has
mostly focused on the learning of athletic skills rather than academic learning (Lau et al., 2015). This application of SRL microanalytic methodology during this study proved to be highly effective for monitoring, prompting and analysing the students’ use of SRL strategies. However, it is possible the use of this protocol effected how the teachers supported their students to engage in metalearning strategy-use.

Lastly, a search for dissertations focused on school-based research using a CGTM approach revealed that in Australia, this methodology is not often applied to research of this nature therefore the use of this approach offers a unique and original contribution to research.

**Resonance.** The notion of resonance pertains to whether the findings and conclusions provide deep insight and fully portray the studied experience (Charmaz, 2014). To ensure that this criteria was achieved, I maintained a stance of critical reflection (Fook, 2011) throughout the study by remaining mindful of the interactions between myself and the participants; by being sensitive to the possibility that the participants’ interpretations of terminology and events may be different to mine, and most importantly, avoiding bias due to a potential theoretical predisposition.

The findings from this investigation were constructed following the analysis of extensive data collected from observations of teachers attempting to support their students to engage in SRL as well as carefully timed, sequenced interviews. To ensure resonance, questioning during interviews was used to clarify the implicit meaning of terms used by participants. When coding the data I strived to keep an open mind and to preserve the actions being observed. I considered multiple options as possible explanations for what was happening and rationale for the organisation and structure of learning during observations.

In addition, the proposed findings from this study identified the specific nature of how each core process supports the students, in an attempt to illustrate the phenomenon under investigation. The depth and breadth of these findings is evidenced through chapters 4 to 8, which also comprehensively portrays the studied experience. In each of those chapters, an analysis of how the processes were integrated was discussed and findings were clearly reported and supported with reasoning.

**Usefulness.** To consider usefulness requires asking if others can use the interpretation provided in the research, in their everyday practice. When discussing how theory can be constructed using a CGTM approach to research, Charmaz (2014) states, ‘We build from
specifics and move to general statements while situating them in the context of their construction’ (p. 232). The substantive theory constructed during this research presents the interpretations made following the analysis of the findings. Three core categories emerged from this analysis, each provide evidence for a generic process for supporting young learners. These processes were further analysed to identify how they function separately and in alignment to support Year 1 writers to engage in SRL. The discussion that follows elaborates upon the usefulness of these notions when examining the possible implications from this study.

**Implications**

The principal notion concluded from this study is that when three specific core learning processes are aligned, there is a potential to create a learning synergy that can support students to engage in SRL. This pertains directly to the context where this investigation was conducted and to the participants from this study. Nevertheless, there are possible implications from this finding, which are discussed below. These implications pertain to (a) a guiding principle for practices in support of SRL, (b) the interpretation and implementation of curriculum frameworks and (c) future research.

This study offers evidence for instructional practices by proposing a guiding design principle that teachers might use to design instruction to support students to engage in SRL. It is suggested that this principle could assist the planning of instruction so students are supported to engage in key SRL skills e.g. goal setting, planning and using strategies, monitoring own progress, responding to feedback, reflecting upon, and evaluating own performance.

The three core learning processes identified during this study present an area of future research, including their possible implications for how teachers can interpret and implement two of the key capabilities in the Victorian Curriculum F-10 (i.e. Critical and Creative thinking Capability and Personal and Social Capability) (Victorian Curriculum and Assessment Authority [VCAA], 2015). It is anticipated that the processes titled An intentional learning process and Metacognitive regulation of learning pertain to aspects from all three strands of the Critical and Creative thinking Capability (i.e. Questions and Possibilities, Reasoning and Metacognition). Additionally, it is suggested that the Personal and Social Capability, a component of the curriculum that aims to enable students to develop the capacity to work well in teams and to develop strategies that support them to manage learning challenges constructively, potentially
relates to the process identified as *Socially structured regulation of learning*, because its function is supporting students through a variety of socially structured learning opportunities.

Future research into SRL might usefully focus on the key findings from this study. Both the evidence and reasoning supporting these propositions has been discussed in length throughout this thesis but for these to be validated, further individual investigation is required, examining more deeply why and how these supporting processes and design principles provide support for young writers when attempting to SRL. Future research could focus on the following:

- Close examination of the impact of each of the learning processes identified in the study, so the supporting functions can be more deeply understood.
- A replication study to determine whether all three core learning processes promote SRL, when implemented with an alternative year level or in a different area of the curriculum.
- Close examination of how the alignment of the three core learning processes provides a *synergy of learning* and how this supports young learners to engage in SRL.
- An examination of what young writers (5 to 7 Year old students) think about when learning, compared to adolescent writers.

In addition to implications for future research focused on SRL, there are also methodological implications that warrant further investigation. It is thought that the microanalytic observation technique designed for this study may be useful in future research because it provides for research in real time and in an authentic setting. It is also argued that CGTM be more commonly considered as a methodology when conducting educational research.

**Researcher Reflections**

At the beginning of this study, I held certain presuppositions about how Year 1 writers could be supported to engage in SRL, which were largely based on the following beliefs:

1. That learning is situated within social and cultural contexts
2. That understanding is actively constructed on the basis of existing knowledge
3. That literacy is a social practice learned by relating to others.

Nevertheless, it must be noted that these presuppositions were vague and disconnected and therefore not specific enough to address the challenge of explaining effectively, how Year 1
writers can be supported to engage in SRL. In addition, there was some scepticism as to whether the goal of constructing a substantial theory was achievable. The most significant personal learnings from this investigative experience include the following realisations. Firstly, although SRL is a complex notion, and to support young learners to engage in SRL is an enormous challenge, if conceptualised as learning practices and processes that clearly define a way forward, then SRL can be applied to classroom contexts effectively. Secondly, the application of CGTM is ontologically suited to research in which students and teachers are directly involved as co-constructors of learning. In addition, CGTM is a highly supportive, systematic, rigorous, engaging and rewarding method for conducting qualitative research.
References


Appendix A: Personal and social capabilities

Organising elements

The Personal and social capability learning continuum is organised into four interrelated elements of:

- Self-awareness
- Self-management
- Social awareness
- Social management

The diagram below sets out these elements.

[Diagram showing the four elements: Self-awareness, Self-management, Social awareness, Social management]

Organising elements for Personal and social capability

Self-awareness

This element involves students in identifying and describing the factors that influence their emotional responses. They develop a realistic sense of their personal abilities, qualities and strengths through knowing what they are feeling in the moment, and having a realistic assessment of their own abilities and a well-grounded sense of self-knowledge and self-confidence. Self-awareness involves students reflecting on and evaluating their learning, identifying personal characteristics that contribute to or limit their effectiveness, learning from successes or failures, and being able to interpret their own emotional states, needs and perspectives. In developing and acting with personal and social capability, students:

- recognise emotions
- recognise personal qualities and achievements
- understand themselves as learners
- develop reflective practice
Self-management

This element involves students in effectively regulating, managing and monitoring their own emotional responses, and persisting in completing tasks and overcoming obstacles. Students are engaged in developing organisational skills, and identifying the resources needed to achieve goals. This is achieved through developing the skills to work independently and to show initiative, learning to be conscientious, delaying gratification and persevering in the face of setbacks and frustrations. It also involves the metacognitive skill of learning when and how to use particular strategies. In developing and acting with personal and social capability, students:

- express emotions appropriately
- develop self-discipline and set goals
- work independently and show initiative
- become confident, resilient and adaptable.

Social awareness

This element involves students recognising others’ feelings and knowing how and when to assist others. Students learn to show respect for and understand others’ perspectives, emotional states and needs. They learn to participate in positive, safe and respectful relationships, defining and accepting individual and group roles and responsibilities. Students gain an understanding of the role of advocacy in contemporary society and build their capacity to critique societal constructs and forms of discrimination, such as racism and sexism. In developing and acting with personal and social capability, students:

- appreciate diverse perspectives
- contribute to civil society
- understand relationships.

Social management

This element involves students in interacting effectively and respectfully with a range of adults and peers. Students learn to negotiate and communicate effectively with others; work in teams, positively contribute to groups and collaboratively make decisions; resolve conflict and reach positive outcomes. Students develop the ability to initiate and manage successful personal relationships, and participate in a range of social and communal activities. Social management involves building skills associated with leadership, such as mentoring and role modelling. In developing and acting with personal and social capability, students:

- communicate effectively
- work collaboratively
- make decisions
- negotiate and resolve conflict
- develop leadership skills.
## Appendix B: Microanalytic observation table

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Appendix C: Interview Questions

Information Gathering Interview

- What age are you?
- What year did you begin teaching?
- How many years have you been teaching?...at this school?...in a junior level?
- What kinds of actions can students use to self-regulate their learning?
- When do SRL strategies promote learning?
- How can SRL strategies promote learning?
- What term would you use with your students when talking about goals for learning?
- When and under what conditions do students use self-regulated learning strategies?
- What types of support can be provided to students to support them to self-regulate their learning?

Term 1 Interview

- Can you please explain how you decided upon ... as a student who has a high ability to SRL?
- Can you please explain how you decided upon ... as a student who has a medium ability to SRL?
- Can you please explain how you decided upon ... as a student who has a low ability to SRL?
- When planning your writing lesson, how did you design it so your students were supported to SRL?

Questions asked when looking at each student’s writing sample:

N.B. these same questions were repeated in Terms 2, 3 & 4 interviews:

- Did this student have a goal for their writing?
- Was this goal relevant to the development of their writing?
- Did they use a strategy to achieve this goal?
- How did this strategy help them to self-regulate their learning of writing?
- What conditions are supporting this student to SRL?

Term 2 Interview

- Can you please describe how your team planning sessions operate?
- Although you may not use the term SRL specifically, is supporting the students to become SRL ever the focus of discussion during planning sessions? If so, how do you plan for this?
- How and when are learning intentions/success criteria planned during planning sessions?
- How does your team plan for writing instruction?
• You displayed and referred to success criteria in your lesson, how do you think this supports the students?
• When you set up for today’s lesson, how did you set up your learning space and why did you make these choices?

Term 3 Interview
• Can you please sketch me an outline of the planner you use during planning so I can visualise it and as you’re doing that can you describe how you use it to support instruction?
• Which components of this planning process do you consider most important and why and which components do you find the easiest to implement and why? Do you have ideas on how to improve on this practice?
• You’ve mentioned previously that you pre-plan enabling prompts – can you please describe how this is done?
• Do students commonly have personal goals on top of SC, if so, how do they decide upon/construct their personal goal?
• When I’m not visiting and observing, do you still ask students to state their goal, ask them what strategy they will use or have used and whether they achieved their goal?
  o Can you describe how you ask these questions?
  o What are the benefits from asking them these questions?
• How do you insure that students know what strategies to use in order to achieve their SC?
• How do you organise your students normally when you’ve finished your lesson introduction and why do you use this arrangement?
• How do you think peers can support each other’s learning?
  o How do you organise the students so they are can support each other’s learning?
  o How much of a priority is this for you?

Term 4 Interview
• How do you determine what the students are next ready to learn about how to write?
• How do you monitor and evaluate the students’ ability to SRL?
• How do you support the students to reflect on their writing development?
• What strategies do you think you could implement to support the students to SRL?
• What do you see as the biggest challenge (or barrier) for students when learning to SRL?
• If you had a magic wand or an unlimited budget, what changes would you implement so you could support students to SRL?
## Appendix D: Writing Analysis Tool

<table>
<thead>
<tr>
<th>Rating</th>
<th>Text Structure</th>
<th>Sentence structure &amp; Grammatical features</th>
<th>Vocabulary</th>
<th>Spelling</th>
<th>Punctuation</th>
<th>Handwriting/Legibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No clear message.</td>
<td>Random words of personal significance, such as their own name or those of family members.</td>
<td>Records word of personal significance, such as their own name or those of family members.</td>
<td>Random letters/letter like symbols</td>
<td>No evidence of punctuation</td>
<td>Letter like forms with some recognisable letters</td>
</tr>
<tr>
<td>2</td>
<td>One or more ideas (not related).</td>
<td>Shows an awareness of correct sentence parts including noun/verb agreement. Meaning may be unclear.</td>
<td>Uses familiar, common words (e.g. like, went) and one, two and three letter high frequency words (e.g. I, my, to, the, a, see, me).</td>
<td>Semi-phonetic, consonant framework, alongside representation of dominant vowel sounds. Correct spelling of some two and three letter high frequency words (e.g. the, my, to, can).</td>
<td>Some use of capital letters and/or full stops</td>
<td>Mix of upper and lower case letters and/or some reversals / distortions (e.g. hnr / ad / bp / vy / i i).</td>
</tr>
<tr>
<td>3</td>
<td>Two or three related ideas. May also include other unrelated ideas.</td>
<td>Uses simple clauses, with nouns, verbs, adverbs, which may be linked by “and”. Meaning clear.</td>
<td>Everyday vocabulary, for example Oxford first 307 word list plus proper nouns (particular to the child’s cultural context e.g. Fruit Fly Circus, Sydney Opera House).</td>
<td>Phonetic spelling – plausible attempts with most sounds in words represented. Correct spelling of three and four letter high frequency words (e.g. the, like, come, have, went).</td>
<td>Correct use of capital letters and full stops at the start and end of sentences.</td>
<td>Mostly correct letter formations yet may contain poor spacing, positioning, or messy corrections.</td>
</tr>
<tr>
<td>4</td>
<td>Four or more sequenced ideas. Clearly connected.</td>
<td>Uses simple and compound sentence/s with appropriate conjunctions (e.g. and, but, then). Use of adverbial phrases to indicate when, where, how or with whom.</td>
<td>Uses a range of vocabulary, including topic specific words (e.g. A story about going to the zoo might include animal names and behaviours).</td>
<td>Use of orthographic patterns or common English letter sequences. If incorrect they are plausible alternatives (e.g. er for ir or ur; cort for caught). Use of some digraphs (ck, ay). Correct use of inflections (ed, ing). Correct spelling of common words (e.g. was, here, they, this).</td>
<td>Some use, either correct or incorrect, of any of the following: • Proper noun capitalisation, • Speech marks, • Question mark, • Exclamation mark, • Commas for lists, • Apostrophe for possession.</td>
<td>Letters correctly formed, mostly well-spaced and positioned.</td>
</tr>
<tr>
<td>5</td>
<td>Evidence of structure and features of genre (text type). eg. recount, narrative, report letter.</td>
<td>Uses a variety of sentence structures: simple, compound and complex. Pronoun reference is correct to track a character or object over sentences.</td>
<td>Demonstrate a variety of vocabulary choices. Includes descriptive or emotive language.</td>
<td>Use of some irregular spelling patterns (e.g. light, cough) Application of spelling rules (e.g. hope/hoping, skip/skipping). Correct spelling of more complex common words</td>
<td>Uses a range of punctuation correctly.</td>
<td>Regularity of letter size, shape, placement, orientation and spacing.</td>
</tr>
<tr>
<td></td>
<td>Complex text which shows strong evidence of the features of text type, purpose and audience.</td>
<td>Demonstrates variety in sentence structures, sentence length, and uses a range of sentence beginnings. Sentences flow with logical sequence throughout the text and show a consistent use of tense.</td>
<td>Correct use of unique field or technically specific vocabulary. Use of figurative language such as metaphor and/or simile.</td>
<td>Correct spelling of most words including multisyllabic and phonetically irregular words. Making plausible attempts at unusual words.</td>
<td>Demonstrates control over a variety of punctuation to enhance text meaning.</td>
<td>Correct, consistent, legible, appearing to be fluent</td>
</tr>
</tbody>
</table>
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