Faculty of Education and Social Work

An Investigation of Self-regulated Strategy

Development as a framework to enhance student

writing in an Australian mainstream classroom.

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AUTHOR'S DECLARATION

This is to certify that:

    I.   this thesis comprises only my original work towards the Master of Education (Research).

   II.   due acknowledgement has been made in the text to all other material used.

 III.   the thesis does not exceed the word length for this degree.

 IV.   no part of this work has been used for the award of another degree.

  V.   this thesis meets the *University of Sydney Human Research Ethics Committee (HREC) requirements for the conduct of research*.

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ABSTRACT

This research aimed to investigate self regulated strategy development (SRSD), an instructional approach which has been developed over the past 30 years as a framework to scaffold students' writing by bringing "together powerful strategies for writing and critical strategies for self-regulation of the writing process" (Harris, Graham, Mason & Friedlander, 2008a, p. 4). The ultimate goal being to teach students to become independent users of the cognitive and meta-cognitive strategies used by successful writers.

The study used a mixed method quasi-experimental approach with a treatment and a comparison group of two Year 5 mainstream classes (59 students). The intervention, implementation of the SRSD model (independent variable) with the treatment group, was carried out in the classroom, during the writing period, over seven weeks, of two 45 minute lessons per week.

There was a range of assessment tools measuring the four dependent variables: writing improvement, self regulatory behaviours, writing understandings and writing confidence. Codeable quantitative data from writing samples and surveys, and qualitative data from interviews were collected from students. Pretest, post-test and maintenance data for both the Treatment and Comparison groups were collected for each of the four dependent variables. Statistical analysis was undertaken to establish differences both within and between the two groups over the three time periods of the study.

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CHAPTER ONE
INTRODUCTION

There is consensus across research that writing is a complex and challenging task (Garcia-Sanchez & Fidalgo-Redondo, 2006; Harris, Schmidt & Graham, 1997; Helsel & Greenberg, 2007; Ortiz Lienemann & Reid, 2006; Taft & Mason, 2011). It is a task that is essential in today's world (Harris, Santangelo & Graham, 2008b; National Writing Project & Cargin, 2006)

Writing serves a multitude of purposes beyond informing or entertaining. It is a vital tool through all stages of life, whether it be in education, employment or in one's personal life (Harris et al., 2008b; Mason, Harris & Graham, 2011; Taft & Mason, 2011). In today's global world writing facilitates communication and creates links between peoples, communities and nations (Harris et al., 2008b), and it fosters a sense of heritage and belonging (Harris, Graham, Brindle & Sandmel, 2009). Within all education settings it is a crucial tool for learning and for demonstrating knowledge (Graham, 2012; Hooper, 2002; Hoover, Kubina & Mason, 2012), as well as a component in state and national literacy benchmarking (Chalk, Hagan-Burke & Mack, 2005; Hooper, 2002; NAPLAN Summary report, 2012). In the workplace it is expected that employees will have the competencies to fulfill successfully the demands for written work (Hoover et al., 2012; National Commission on Writing, 2003), while at a personal level, writing skills can be a factor as to future tertiary studies (Graham, 2012) and job success (Hoover et al., 2012; National Commission on Writing, 2004; Turbill & Bean, 2006). Also, in today's high tech world, computer use and social media (e.g., blogs, texting, facebook, twitter, memes) require quite sophisticated writing styles (Graham, 2012).

The highly complex nature of writing demands that writers manage simultaneously a wide range of skills (De la Paz & Graham, 2002); and not just the low order mechanical rules of writing, such as punctuation, spelling, handwriting. They must also be able to focus on the higher order cognitive aspects of organisation, features, form, purpose and audience (Harris, Graham, Mason & Saddler, 2002). Research has also shown that writing requires extensive self-regulation and attention to remain goal orientated (Harris, Graham & Deshler, 1997; Harris, Graham & Mason, 2003; Helsel & Greenberg, 2007; Taft & Mason, 2011). Struggling writers often have difficulties with both the low order mechanics of writing, as well as many of the cognitive aspects such as planning, revising and generating content. As they do not like writing, they demonstrate minimal

perseverance (Hess & Wheldall, 1999), and often have an unrealistic sense of self-efficacy (Graham, Harris & Mason, 2005; Hoover et al., 2012).

Considering the complexities of writing and learning to write, the challenges faced by many struggling writers and the need for effective writing skills across all aspects of life, it is of concern that academic interest and research in writing has only developed over the last few decades. Compared to maths and reading, research into writing is limited (Harris et al., 2009; Hooper, 2002; Schumaker & Deshler, 2003). As highlighted in the report, *The Neglected R* (2003), and, as indicated by Turbill and Bean (2006), there is a need for a more proactive approach to examining and supporting the writing ability of students. *The Neglected R* report emphasises the concern is not that most students cannot write, but that they cannot write at a level expected in today's literate society. Another focus of researchers' concern focus is where and how teachers fit writing into their literacy programming. Teachers do not dispute the importance of writing (Baker, Chard, Ketterlin-Geller, Apichatabutra & Doabler, 2009), and it is highlighted in syllabus documents. In the 1997 NSW English curriculum K-12 (Board of Studies) and the current national English curriculum (Australian Curriculum, Assessment and Reporting Authority (ACARA), 2012) writing is prominent; however this is often not reflected in the amount of time directly dedicated to teaching writing (Graham, Gillespie & McKeown, 2013a; National Assessment of Educational Progress: Writing, 2011). Also of concern is teachers' reported lack of confidence regarding their professional knowledge and ability to teach writing effectively (Gilbert & Graham, 2010; Troia and Graham, 2003; Turbill and Bean, 2006).

A suggestion to account for the lack of writing time in classrooms has been the belief that methods to improve student writing are not available, yet two comprehensive meta-analysis studies of writing approaches (Graham & Perin, 2007a; Graham McKeown, Kiuhara & Harris, 2012) have put forth empirically based evidence highlighting a number of practices that support positive changes in student writing. These research-based approaches reflect the ideas regarding successful writing that have developed out of the work by researchers in the 1970s and 1980s. The 1970s saw a move in thinking from the behaviourist approach of the 1960s to ideas in psychology and education about cognition and cognitive development. Seminal work by such academics as Flavell, Flowers and Hayes, Zimmerman and Bandura was instrumental in new thinking about the processes involved in writing and how writing could be taught.

Flavell (1979) was interested in the new area of cognition, meta-cognition, and the role it played in language acquisition, comprehension, writing, memory and self-regulation.

Cognition relates to the skills necessary to perform a task, while metacognition is the awareness and knowledge of one's own thinking, or, to know and understand, how the task was performed (Nuckles, Hubner and Renkl, 2009; Schraw, 1998). Flavell saw the real potential of metacognition and cognitive monitoring in an educational context. The work of Flowers and Hayes, and Bereiter and Scadamalia also had significant influence on research thinking about writing ability. Flowers and Hayes (1980) investigated the cognitive strategies and understandings used by expert writers to shed light on the writing process. Later work by Zimmerman and Schunk (1992) developed understandings about self-regulation and writing within the constructs of cognition, meta and social cognition, while from Bandura's theory of social cognition came the notion of self agency, that learners can take charge and direct their own learning (Hacker, Dunlosky & Graesser, 2009; Zimmerman, Bandura & Martinez-Pons, 1992).

Prior to the 1980s, writing was viewed in terms of form (product), where the focus was on the mechanics and grammar of writing. Due to the work of such thinkers as Flavell, Flowers and Hayes, and Zimmerman there was a change in the thinking and approaches to a focus on the content and processes involved in successful writing.

It was from this diversity of thinking that in the early 1980s the educational psychologists and special educators, Steve Graham and Karen Harris began to develop their instructional model, self regulated strategy development (SRSD). As special educators they felt that all students would benefit from explicit teaching that addressed their cognitive, behavioural and affect needs and strengths (Harris et al., 1997). They developed a framework that tapped into a variety of psychological ideas and theories they felt addressed the learning needs of students at-risk.

Over the last thirty years implementation of the SRSD framework has mainly focused on writing, and there is a small but growing body of research on SRSD and writing in a range of educational settings. The efficacy of strategy instruction and SRSD has been endorsed by two recent meta-analysis studies (Graham & Perin, 2007a; Graham et al., 2012). However most of this research is within American educational settings.

A source of stimulus for research and classroom interventions must come from both mandated legislation (Disability Discrimination Act 1992, Disability Standards for Education 2005 in Australia; Individuals with Disabilities Education Act (IDEA) 2004 in US) which sets the guidelines to ensure equity and inclusion for all students, as well as the imperative to assist all students with special needs to attain nationally set literacy bench marks (Tracy, Graham & Reid, 2009); however, little of the research focus or intervention support has been on writing (Graham et al. 2012).

In Australia there are no comparable actions focusing particularly on writing difficulties and there has been little or no such action specifically highlighting the need to promote writing within education reform. Writing comes under the general literacy umbrella, and as such, sits within the Australian curriculum, K-10 English, as a sub-strand of each of three English strands: language (text structure and organization), literature (creating literature) and literacy (creating texts) (ACARA National curriculum, 2013). Its relevance is also noted within other subject area curricula. Hence, writing is presented as an area of literacy across grades and embedded in all subjects. Concerns, however, are raised by Turbill and Bean (2006), as to where and when in their program teachers teach writing. They also report teachers' lack of confidence to teach writing, and express concern about the limited access to pre and in-service training in effective, classroom based writing practices.

Gilbert & Graham (2010) raise issues relating to the kind of writing tasks set by teachers. These tasks are mostly short answer or writing to learn activities, rather than extended writing, and time dedicated to daily writing is limited, with "writing is a prisoner of time", (Neglected R Report, 2003, p 20). Most worrying of all, their study survey indicated that almost 60% of evidence based instructional practices were infrequently used by most teachers.

In Australia writing has been recognised as one of the essential literacy skills and has always been seen as a component of high stake assessment data. With the inception of NSW Basic Skills Testing for Years 3, 5 and 7 in 1988, assessment on two extended writing tasks was included as part of New South Wales DEC's assessment and reporting of literacy competencies. Today, Australian national benchmarking is provided by the *National Assessment Program- Literacy and Numeracy* (NAPLAN) an annual, standards based testing program for all students in Years 3, 5, 7 and 9. An extended writing task is part of the literacy section of NAPLAN that currently requires students to plan and produce a narrative text. The 2012 data indicates that at a Year 5 level Australia wide, there are approximately 18.5% of students at or below national minimum standards (NMS) (NMS: defined as student demonstrating only basic elements of literacy for the year level) (NAPLAN Summary report, 2012, p. 4). As a result this study will focus on teaching students the production of a Stage 3 narrative text.

With such a demonstrated need to support struggling writers the aims, of SRSD meet the intent of the goals of the *Melbourne Declaration of Educational Goals for Young Australians* (2008), which advocates a curriculum that recognizes the need for schools that promote 'equity and excellence' (p. 3), and also students who are successful life long

learners "playing an active role in their own learning" (p. 8) to develop creative thinking, problem solving and engagement with new ideas. SRSD's goals also fit well within the NSW DEC Strategic Plan 2012-2017 priority of increasing levels of attainment for all students, where "closing gaps in achievement" is seen within the context of a challenging education with high expectations, that caters for diversity and promotes lifelong learning.

The impetus for this study is fourfold: to address (i) the obvious vital, but neglected role that writing holds within the 3Rs, (ii) the considerable lack of writing research compared to reading and maths and (iii), in relation to SRSD, the limited research on SRSD outside of a core group of American researchers. However more importantly is the issue that within Australia generally, there is very little research looking at students who struggle with writing or effective classroom based interventions to support these students.

LITERATURE REVIEW

There is research agreement as to the demands and difficulties of writing (Harris et al., 2003; Harris, Graham, Mason & Friedlander, 2008; National Writing Project, 2006; Taft & Mason, 2011). Further, learning to write can be a challenging undertaking for students in primary school (Harris et al., 2008b; Harris et al., 2009). Chapter 2 will review the literature on writing and writing difficulties in order to discuss the theoretical underpinnings of learning to be a skilled writer. It will also address the significance of writing in today's society, including its place in national testing. Finally, this chapter will provide an in-depth discussion on self-regulated strategy development and writing, the focus of this study.

2.1 Nature of Skilled Writing

Writing is a complex task and one of the most difficult skills students are expected to master in school (De La Paz & Graham, 2002; Graham et al., 2013; Ortiz Lienemann et al., 2006a). As *Writing Next* succinctly states, "Writing well is not just an option for young people- it is a necessity." (Graham & Perin, 2007b, p. 3). This presents a pressing need for schools to focus on an area of literacy that many consider 'neglected' (Gilbert & Graham, 2010; National Commission on writing, 2003; Turbill & Bean, 2006).

The study of skilled writers has contributed greatly to the research on what constitutes successful writing and has guided studies aimed at understanding and improving students' ability to write (Ferrari, Bouffard & Rainville, 1998; Harris et al., 1997; Harris, Graham & Mason, 2003; Milford & Harrison, 2010). However, even successful writers lament the difficulties and frustration associated with becoming a successful writer (Santangelo, Harris & Graham, 2008), as demonstrated by the reflective comments of several new Australian writers:

> "It's very daunting to think about writing an entire book, so I break up the process into more manageable bites. I'll play with an idea for a few months, ..." (Pip Harry, a freelance journalist: see Appendix A for full text commentary.)

> "Writing is always difficult, … but there is still the endless requirement that words need to be put down, and in the right order, and often with no real sense of inspiration in their initial placement. …" (Trent Jamieson, Science fiction and fantasy writer: see Appendix A for full text commentary.)

"I am someone who most definitely struggles with procrastination. … But I have, over time, developed strategies that help me start writing, and maintain the necessary focus to keep going." (Adina West, fantasy writer: see Appendix A for full text commentary.)

Despite such expressions of frustration, it is the knowledge and strategies used by these skilled writers that provided the starting point for this researcher's investigations into successful writing behaviours, and the difficulties faced by novice and struggling writers. The following section will discuss the knowledge and skills of expert writers and the difficulties faced by novice and struggling writers.

2.2 Skilled versus Less-Skilled Writing

The early work of Hayes and Flower (1980) with skilled adult writers provided invaluable information as to the "mental activity that underlies the act of writing" (Graham & Perin, 2007b, p. 24). Skilled writers have a strong understanding of the writing process and a rich, well-developed knowledge of the cognitive strategies and processes needed for good writing (Garcia-Sanchez et al., 2006). They use meta-cognitive knowledge and are purposefully active in the self-regulation of specific, personally developed strategies and processes (Flower & Hayes, 1980; Harris et al., 1997) that help them organise, plan, monitor and revise during the writing process. They appreciate the need for planning, organising and revising of their work (Reid & Ortiz Lienemann, 2006).

Skilled writers implicitly understand they have to manage many demands at once, so must be flexible in their approach. However, they are aware of the need for setting goals, considering their audience (De La Paz & Graham, 2002) and self-monitoring (Harris et al., 2003). Skilled writers spend a significant amount of time both planning prior to writing, as well as revising during their writing (Ferrari et al., 1998). They have extensive knowledge about writing genres, devices and conventions (Santangelo et al., 2008), and can adapt their writing to different contexts, audiences and purposes (Graham & Perin, 2007b).

"Writing is hard work" (Harris et al., 2002 p. 111), demanding the simultaneous coordination of quite sophisticated levels of self-regulation, cognitive effort and attention control (Helsel & Greenberg, 2007; Ortiz Lienemann et al., 2006a). As Ferrari et al. (1998) said, "good writers know more about writing than poor writers" (p. 473), so it would seem appropriate to endeavour to use this knowledge to help less skilled writers develop the more sophisticated approaches of skilled writers (Graham et al., 2013; Milford & Harrison, 2010; Saddler, 2006). Often it is the managing of the essential skills and

strategies used by confident writers that causes students to struggle with writing (De la Paz & Graham, 2002; Santangelo et al., 2008; Taft & Mason, 2011).

There is a range of challenges that struggling writers face (Santangelo et al., 2008) including limited knowledge of what constitutes good writing and ineffective approaches to writing. They lack knowledge regarding the details of writing and the how and when to use them (Harris et al., 2002; Harris et al., 2008b; Hawthorn, 2002; Taft & Mason, 2011). They also believe good writing comprises form and mechanical aspects, (such as spelling and punctuation) (Troia & Graham, 2003).

Poor writers often focus all their attention on generating ideas, termed "knowledge-telling" (Bereiter, Burtis & Scardamalia, 1988, p. 263). All effort is focused on 'telling' all they know about the topic with little thought given to their audience or organising and evaluating ideas (Ferrari et al., 1998; Harris et al., 1997; Hess & Wheldall, 1999; Reid & Ortiz Lienemann, 2006; Troia & Graham, 2002). Each sentence or idea is a stimulus for the next, rather than taking into consideration the needs of the reader, or organisation of the text (Graham & Harris, 1999; Graham et al., 2005; Zito, Adkins, Gavins, Harris & Graham, 2007). However, even generating content can present a problem for struggling writers. They often use whatever comes to mind, as they have difficulty retrieving information from their memory (Chalk et al., 2005; Saddler, 2006) or using outside resources to generate ideas (Mason et al., 2011; Zito et al., 2007). Hence their ideas are not developed and they often produce short, disjointed texts, with little elaboration (Chalk et al., 2005; Mason et al., 2011b; Taft & Mason, 2011).

While less skilled writers experience difficulties with memory and generating ideas, little or no planning is another weakness. Skilled writers spend significant time planning and setting their goals, which guide their writing (De la Paz & Graham, 2002). Poor writers do little, if any, planning and even when prompted, lack the writing and self-monitoring strategies to do so. Often when given writing tasks the struggling writer begins immediately with little or no preparation (Chalk et al., 2005; Graham et al., 2005; Reid & Ortiz Lienemann, 2006). Hence, find planning for writing difficult and consequently invest minimal time and effort when developing this skill (Chalk et al., 2005; Hess & Wheldall, 1999; Mason et al., 2011b; Troia & Graham, 2002; Zito et al., 2007).

An essential part of the good writer's repertoire is evaluating and revising in order to shape and improve the finished product. Less skilled writers do little revision without support (Hawthorne, 2002; Helsel & Greenberg, 2002). Most revisions made are mechanical changes in spelling, punctuation and word substitution or making it look

'neater' (Baker, Gersten & Graham, 2003; Chalk et al., 2005; Mason et al., 2011b) rather than revising for clarity of meaning or purpose (Ortiz Lienemann & Reid, 2006).

For expert writers transcription skills operate at an automatic level; they do not have to use any of their writing 'energy' on the mechanical aspects of writing. However, poor writers struggle with trying to get their ideas on paper as they often have trouble with the lower level, mechanical skills of writing (Harris et al., 1997; Harris et al., 2008b; Hawthorne, 2002). Their handwriting is often slow and they struggle with spelling and grammatical structure (Chalk et al., 2005; Kim, Al Otaiba, Sidler & Greulich, 2013) hence, much of their writing effort is focused on transcription, with the result that other areas of writing are compromised (Chalk et al., 2005; Hess & Wheldall, 1999; Kim, Al Otaiba, Sidler & Gruelich, 2013; Mason et al., 2011b; Troia & Graham 2003).

Poor writers demonstrate minimal evidence of persistence and can have an unrealistic sense of self-efficacy (Graham et al., 2005; Harris et al., 2008b; Zito et al., 2007). Students who believe they can write are likely to invest more energy in the task and be more persistent when faced with difficulties (Harris et al., 2008a). Poor writers do not like writing, often due to ongoing failure or lack of reward for their efforts (Hess & Wheldall, 1999). They therefore invest minimal time and effort and find it difficult to maintain attention to finish writing tasks (Harris et al., 2002; Hess & Wheldall, 1999; Taft and Mason, 2011). They often overstate their ability to write (Harris et al., 2003; Graham & Harris, 2005; Helsel & Greenberg, 2007; Hoover et al., 2012). Some may experience frustration and anxiety, while some may express negative attitudes and emotions about writing and themselves as writers (Harris et al., 2002; Harris et al., 2008b; Hawthorne, 2002,), both of which impact negatively on their ability to become skilled writers.

From this discussion it appears that less skilled writers focus more on the product, rather than the processes underpinning effective writing (Lin, 2007) and their lack of skills and strategies results in increased cognitive and emotional demands during their attempts at writing (Ferrari et al., 1989; Hess & Wheldall, 1999). A growing body of research indicates that validated instructional approaches can have a positive impact on student performance (Schumaker & Deshler, 2003).

2.3 Impact of Poor Writing Skills

It is imperative that these writing challenges are addressed in a purposeful way. Writing is a vital tool for learning and for school success (Harris et al., 2008b; Hoover, 2012; Taft & Mason, 2011), having a significant impact at all stages of a person's life (Harris, 2008). Poor writing ability can present a barrier to a person's life goals in

education, employment and other life pursuits (Harris et al., 2008b; Mason et al., 2011a; Taft & Mason, 2011).

From their early school years students who experience difficulty with learning to write well are disadvantaged across all curriculum areas where writing is the primary means of demonstrating and assessing knowledge (Graham, 2012; Hooper, 2002; Hoover et al., 2012; Saddler & Asaro-Saddler, 2013). It can result in their inability to fully communicate their ideas, thoughts and feelings or demonstrate knowledge (Chalk et al., 2005; ERIUOSEP Special Project, 2002; Ferrari et al., 1998; Graham & Perin, 2007b; Mason et al., 2011b; Taft & Mason, 2011). As they are less able to use writing to support and extend their learning (Ferrari et al., 1998, Graham & Perin, 2007a), this impacts negatively, because "writing is learning" (National Commission on Writing, 2003, p. 13), meaning it helps students understand what they know, while extending and deepening their knowledge (Graham & Perin, 2007a, 2007b). Mason, Kubina and Taft (2011) note that classroom writing benefits students' comprehension and vocabulary, as it allows them to make connections through the writing process. Writing is a means to enhance reading comprehension (Graham & Herbert, 2010; Herbert, Gillespie & Graham, 2013, Kim et al., 2013).

Struggling writers are also at risk when their writing competencies are measured in high stakes testing such as the National Assessment of Educational Progress (NAEP) in America and NAPLAN (Australia) (Chalk et al., 2005; ERIUOSEP Special Project, 2002; Hooper, 2002). As NAEP and NAPLAN data attest, many students do not attain the benchmarks set in these tests (Chalk et al., 2005). National testing programs are even more significant for students with special needs (Harris & Graham, 1999; Ortiz Lienemann & Reid, 2006), as they highlight the issue of access and participation for all students "to ensure that the student is able to participate in the courses or programs provided by the educational institution, … on the same basis as a student without a disability, and without experiencing discrimination." (Disability Standards for Education, section 5.2(1), 2005). Hence, from the perspective of social equity and relevant legislation, schools need to be accountable for ensuring all such principles are upheld and that there is transparency to ensure effective outcomes and equity according to the processes of government funding.

Students who have difficulty writing are less likely to participate in some form of higher or post secondary education (Graham, 2012; Graham & Perin, 2007b), and are disadvantaged in their future employment and promotion potential (Baker et al., 2009; Graham & Perin, 2007b; Hoover, 2012; Turbill and Bean, 2006). At tertiary levels and in the workplace, both professional and non professional, there is an expectation that students

and workers will use written communication to demonstrate knowledge via reports, documents and electronic communication (Graham, 2012; Graham & Perin, 2007b; Hoover, 2012; National Commission on Writing, 2003). *The Neglected R* report cites a 2002 finding from Californian colleges that less than 50% of first year college students were are able to write papers relatively free from language errors.   The National Writing Project, (2007 cited by Graham, 2012) reports that for 90% of white collar and 80% blue-collar workers writing is important for job success, and has an influence on hiring and decisions regarding promotion. This conclusion is supported by the comment from the 2004 survey of USA business leaders (College Entrance Examination Board, 2004) " that in today's workplace writing is a "threshold skill" for hiring and promotion among salaried (i.e., professional) employees" (p. 5).

Another concern raised is that poor writing skills present a considerable future financial cost to employers, tertiary educational facilities and governments who have to provide remedial writing courses for students and workers (Graham & Perin, 2007b) whose writing performance is not adequate to the demands of college or the workplace. It has been estimated "that annual private-sector costs for providing writing training could be as high as $3.1 billion" (College Entrance Examination Board, 2004, p. 18).

In Australia there does not appear to be any focus or concern specifically regarding writing, and any discussion focuses on adult literacy. The 2006 Adult Literacy and Life Skills survey identified a significant proportion of the adult Australian population (40% of employed, 60% of unemployed) had poor to very poor literacy and numeracy levels (Australian Government, Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education, 2013). The National Centre for Vocational Education Research report, *Adult Literacy and Numeracy: Research and Future Strategy* (2009) highlighted the link between poor literacy skills and employment, health, education and wage levels. It made a specific note about the financial cost to business of poor literacy levels.

It is not only in school or at work that writing is of significance. Through history, writing has enabled people to develop a sense of heritage (Harris et al., 2009), allowing communication over distance and time (Graham & Perin, 2007b). In today's society communication via the written word is perhaps even more important than in the past (Taft & Mason, 2011). As Harris, Santangelo and Graham (2008) point out, in today's global world writing facilitates communication and connections between peoples, communities and nations.

At a local, personal level, writing in a variety of forms is just as important in our social life as it was when people maintained contact through letter writing. Over the last 20 years, the development of computers, and in particular the internet, has resulted in one of the great changes in society, the extraordinary growth of social media (e.g., blogs, texting, facebook, twitter, memes), all of which are part of everyday life and requiring quite sophisticated writing skills (Graham, 2012). Consequently the diverse nature of the written word today, relative to the past, means it extends beyond those who write for their living, such as newspaper journalists or authors of books, and even beyond hardcopy printed text to the softcopy on-screen text (National Writing Project, 2006).

2.4 High Stakes Testing of Writing

Despite the persuasive evidence of a need for highly competent writers in today's literate world, there is a short history of academic research into writing. Also it is not difficult to find evidence of the 'neglected' nature of writing relative to reading and mathematics within reports, and the research.

At a global level the Organisation for Economic Co-operation and Development's (OECD) Program for International Assessment evaluates the education systems of over 70 countries by assessing "competencies in key subjects" (OECD, webpage). As the key subjects assessed are reading, mathematics and science, it is implied that writing is not considered a 'key subject'. The omission of writing from assessments by such an organisation is of concern as it reinforces the notion that there is no global imperative for government writing initiatives or for academics to prioritise writing research. It also means there is no external benchmark for student outcomes or standards in the area of writing.

The National Commission report on writing in America's School and Colleges (2003), *The Neglected R: The Need for a Writing Revolution*, provides a strong case for greater focus to be given to the development of writing skills in USA primary schools. Concerns raised in the report include how little students write, the difficulty of assessing writing performance and the need for teachers' professional development in writing instruction. The report also notes that students can write, but they cannot write at a level expected in today's literate society.

Baker et al. (2009) note that educators do not question the importance of directly teaching effective writing skills. However, the amount of time dedicated to explicitly and systematically teaching writing does not support this view (Gilbert & Graham, 2010; Graham & Harris, 1997; Graham et al., 2013). Writing instruction receives much less

instruction time than reading or mathematics (Baker et al., 2003). Writing is usually incorporated into reading or content area instruction as writing-to-learn activities, such as worksheets, responses to questions and note-taking, rather than extended writing that involved analysis and interpretation (Gilbert & Graham, 2010). Claims of limited time dedicated to writing in US schools are supported in the NAEP: The nation's report card: Writing 2011 (National Centre for Education Statistics, 2012). It reports that 34% of Grade 8 students write for less than 15 minutes in their daily English class, while for Grade 12 students, 39% write one page or less per week for their English homework.

Table 1 shows the reported results for NAEP data on writing in Year 8 and 12 students over the past 13 years. These data show little growth in student writing capabilities over the 13 years, despite the impetus of recommendations from such reports as *The Neglected R: The Need for a Writing Revolution* (The National Commission Report, 2003*)*.

Table 1

National Assessment of Educational Progress: Data on Writing

Grade	Year	Below basic %	At Basic %	Proficient %	Advanced %
Yr 8	1998	16	56	26	1
	2003	15	54	30	1
	2007	12	56	31	1
	2011	20	54	24	3
Yr 12	1998	22	55	22	1
	2003	26	51	22	1
	2007	18	57	34	1
	2011	21	52	24	3

Source: NEAP: The nation's report card: Writing (1998, 2003, 2008, 2011)

Of concern to the American educational community is that consistently over this time, more than 60% of Year 8 and of Year 12 students are at or below a basic level in writing. This level of achievement is defined by NAEP: The nation's report card: Writing 2011 guidelines as 'partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade' (p. 7).

Results are even more perturbing for students with learning difficulties (Chalk et al., 2005). The NAEP: The nation's report card: Writing 2008 reports just 6% of Grade 8 and

5% of Grade 12 students with a disability performed at or above the basic level. That is, 19 out of 20 students with a disability are not performing at grade level (Graham, 2012).

Data on Australian students' writing performance is found in the annually published NAPLAN reports (2009-2012). NAPLAN is a standard based test, with writing assessed against ten curriculum-based criteria focusing on text structure, text features and purpose. It is administered yearly to every Australian student in Years 3, 5, 7 and 9. All NAPLAN tests are equated so that results can be compared with those from previous years. Students whose results are in the national minimum standard (NMS) band have demonstrated only the basic elements of literacy, and numeracy, for their year level.

Results for the last four years (shown in Table 2) highlight a consistent trend from Year 3 through Year 9, of an increasing number of students performing at the NMS band or below. Despite such a trend, strategic plans in differing education sectors (e.g. NSW DEC's Strategic Plan 2012-2017) still only refer to increasing reading and numeracy levels. No specific mention is made of addressing this concerning trend in writing.

Table 2

National Assessment Program: Literacy and Numeracy Results for Writing

Grade	Year	<NMS %	NMS %	>NMS %
3	2009	2	6	90
	2010	2	5	90
	2011	3	5	90
	2012	3	5	90
5	2009	5	12	81
	2010	5	11	82
	2011	6	12	81
	2012	6	12.5	79
7	2009	6	14	78
	2010	6	14	79
	2011	7	15	76
	2012	8.5	18.5	72
9	2009	11	19	69
	2010	11	19	68
	2011	14	19	66
	2012	17	21	60

Source: NAPLAN Summary Report (2009, 2010, 2011, 2012)
NMS: National Minimum Standard; Table does not include % of absent & exempted students

Graham et al. (2012) propose limited efforts to reform writing instruction are due to beliefs that methods to improve students' writing do not exist. However, meta-analyses undertaken by Graham et al. (2012) for adolescent students, and Graham and Perin (2007a) for elementary students, identified a variety of evidenced based instructional practices that improve the quality of students' writing. Of significance, however, was the very small numbers of studies located. Just 115 studies with elementary students and 123 studies with adolescent students were found to use experimental or quasi-experimental designs over the last thirty-five years (Graham et al., 2012).

Turbill and Bean (2006) expressed their concerns in regard to the state of writing practice within Australian schools. They reported that generally, teachers do not have positive attitudes towards the teaching of writing. In fact, many teachers felt anxious and themselves avoided writing extended texts. Teachers commented that they felt more confident about teaching reading and had many more resources to support their instruction in reading than in writing. Turnbill and Bean eloquently state, "Writing, we therefore argue, is the poor cousin of reading. It is not only the poor cousin, it seems it is also the feared cousin" (p. 1). As highlighted by Graham et al. (2012), Hawthorne (2002) and Turbill and Bean, there are numerous and varied journal articles on reading, while those on writing or the teaching of writing are scarce. Such sources of literature that are available will be used to frame the following discussion.

2.5 Theoretical Underpinning of Skilled Writing

Over the last 30 years there has been a growing body of research giving support to a number of approaches that enhance classroom practice and writing outcomes. These approaches reflect changes in ideas about writing that developed in the late 1970s and 80s with the work of such academics as the developmental psychologist John Flavell and Linda Flower (composition theorist) and John Hayes (cognitive psychologist). These academics were interested in viewing writing as a problem solving, cognitive process involving metacognition, resulting in a shift from a focus on students' written *products* to students' writing *processes*.

Flavell (1979) worked in the new area of cognitive monitoring and metacognition (i.e., the ability to think about one's thinking, or to know what one knows). As a result, it became one of the most widely studied constructs in cognitive, educational and developmental psychology (Hartman, 1998; Tobias & Everson, 2009). This interest rose from an awareness of the impact of metacognition on learning efficiency, critical thinking,

problem solving and their effects on the acquisition, comprehension and retention of what is learnt (Hartman, 1998).

Flavell found there were real differences between young and older students' abilities in "knowing what (they) know" (Tobias & Everson, 2009, p107). He proposed that students who cognitively monitor their actions and learning would learn better than those who did not. Importantly, he proposed it was feasible that metacognition was teachable. His work led to metacognition being defined as one's ability to plan, monitor and evaluate one's learning (Postholm, 2011; Tobias & Everson, 2009) and viewed as having three components: knowledge about metacognition, the ability to monitor one's learning processes, and the ability to control the learning processes (Tobias & Everson, 2009). Later work by Schraw (1998) proposed that metacognition had two distinct parts: knowledge of cognition and regulation of cognition. He also proposed that metacognition was multidimensional, teachable and could be applied across domains (e.g., problem-solving, writing).

Flower and Hayes (1980) were also interested in cognitive theory in relation to writing composition. They investigated the cognitive strategies and understandings utilised by expert writers to shed light on the writing process. Using think-aloud protocols, they analysed the differences in patterns of thinking and composition between good and poor writers, then proposed a cognitive process model for writing that had three main processes: planning (generating and organizing ideas, goal setting), translating ideas into text and reviewing (evaluating, revising, checking written text) (Flower & Hayes, 1981). They emphasised that these processes were not necessarily a linear sequence but that expert writers used them in a flexible, recursive manner to suit their writing needs at different times. Flower and Hayes (1981) were recognised for their work in proposing the importance of goal-directed thinking involved in writing. They noted that "in the act of composing, writers create a hierarchical network of goals and these in turn guide the writing process" (1981, p. 377).

Building on Flower and Hayes' ideas and approaches, Scardamalia, Bereiter and Steinbach (1984) looked on the reflective nature of writing as a form of problem-solving. Their premise was that writing was a reflective process used efficiently by expert writers in "knowledge transforming", (i.e., an intentional, problem solving approach to writing) (Bereiter et al., 1988, p. 264), but not used by novice and poor writers who produced writing primarily in a linear, non-reflective, content driven manner referred to as a "knowledge-telling strategy" (p. 263).

Other theories coming to bear on the move from product to process writing include Bandura's social cognitive theory and the work of Vygotsky. Vygotsky's ideas on the social context of learning and the value of language as a tool for learning (Postholm, 2011) were clearly applicable to the new view of writing as a process. He viewed inner speech as an important action in planning, while regulating one's activity and language between adults and children was a means to convey and support the internalisation of linguistic skills. Once this social language became internalised as verbal thought or inner speech, it became a source of knowledge and self-control. Hence, from this perspective what starts as a social medium (i.e. dialogue with peers, parents, teachers) is gradually internalised as inner dialogue or self-instruction (McCaslin & Hickey, 2009; Postholm, 2011). This position fits well with the proposal put forward by Flavell (1979), and Flower and Hayes (1980), that thinking about one's own thinking guides the writing processes.

Bandura's social cognitive theory includes the idea that learners direct their own learning goals. He also fused this notion with his concept of self-efficacy, the personal ability to make judgements about one's capacity to reach those goals (Schunk, 1994; Zimmerman, Bandura & Pons, 1992). This social cognitive theory has played a major role in another area pertinent in the study of effective writing, that of self-regulated learning (SRL) (Helsel & Greenberg, 2007).

From a social cognition perspective, educational psychologists Zimmerman (1998) and Schunk (1994), viewed self-regulated learning (SRL) as "the degree to which students are metacognitively, motivationally, and behaviourally proactive regulators of their own learning process" (Zimmerman, Bandura & Pons, 1992, p. 664). Zimmerman (1998, 2001, 2008) states that self-regulated learners are masters of their own learning processes with SRL allowing them to move from dependent to autonomous learners. Zimmerman proposed that SRL was a cyclical process of three phases: forethought, performance and self reflection (Zimmerman, 1998), a model which maps onto the Flower and Hayes (1981) model of planning, translating and reviewing (Nuckles et al, 2009). There are obvious links between SRL and cognition (Nuckles et al., 2009), with Schraw, Crippen and Hartley (2006) proposing that SRL consists of cognition, metacognition and motivation.

Research supports the importance of SRL in learning (Schraw, 1998) and learning to write (Graham et al., 2001; Nuckles et al., 2009; Torrance et al., 2007). Students who are actively engaged, with better SRL skills, tend to be more academically motivated and learn more with less effort (Reid & Ortiz Lienemann, 2006; Schunk, 2005; Schraw et al., 2006). However, despite these demonstrated positive outcomes, SRL is often not taught or stressed by class teachers (Schunk, 2005; Zimmerman, 2002).

The theoretical thinking underpinning the processes involved in SRL are well suited to assist schools play a role in creating life-long learners (Melbourne Declaration, 2008; Schraw et al., 2006; Zimmerman 2002), in control of their own learning and personal development. The following discussion will focus on how these processes can be applied to the area of writing in the classroom.

2.6 Research into Writing

Despite the relatively small number of intervention studies in writing as compared with reading, over the past thirty years there have been a number of meta-analyses of the writing research. The earliest meta-analysis by Hillocks (1986), brought together current thinking and research on what he called the "composing processes of writers" (p. 1) and "the writer's repertoire" (p. 63). This meta-analysis of 60 studies, highlighted concerns and difficulties associated with the experimental research on writing. While there are indicators that some writing interventions were more effective than others, Hillocks concluded there was an "enormous amount of research to be done" (p. 243).

This seminal work by Hillocks (1986) has been used to guide subsequent meta-analyses of writing research. These studies are particularly relevant for research on writing intervention and its practical application as they give effect sizes that denote both the statistical and practical consistency and also the strength of different writing interventions (Harris et al., 2008b; Graham, Gillespie & McKeown, 2012). The meta-analyses of writing published over the last decade have addressed writing genre interventions (Gersten & Baker, 2001); strategy instruction (Graham, 2006); all writing interventions, mainstream years 4-12 (Graham & Perrin, 2007a); single subject design studies (Rogers & Graham, 2008); SRSD and LD students (Baker et al., 2009); writing intervention for students with disability other than LD (Taft & Mason, 2011); word processing (Morphy & Graham, 2011); writing effect on reading (Graham & Herbert, 2011); all writing intervention, mainstream years 1-6 (Graham et al., 2012); studies implementing SRSD (Graham, Harris & McKeown, 2013b) and effects of writing on reading comprehension (Herbert, Gillespie & Graham, 2013a).

In examining these differing meta-analyses, specific note was made of the predominance of work done by a small group of researchers working in the United States of America (i.e., Professors Steven Graham and Karen R. Harris). In the last two decades, the growing body of research into writing interventions has been implemented and/or guided by Graham and Harris. Graham and Perin (2007a) note with concern the small number of researchers whose publications were included in their meta-analysis with "little

in the way of research "beyond an individual study or two" (p. 468). This situation, Graham and Perin claim, is linked to the lack of funding by both government and private agencies, hence contributing to writing being referred to as the 'neglected R'.

This dominance of the research by a small group of authors raises the issue of self-citation. A considerable number of the studies cited in this paper and in the meta-analyses by Graham and Perin (2007a) and Graham et al. (2012) were co-authored by Graham and/or Harris and/or a relatively small group of academic colleagues who at some time worked or studied with these two researchers (33% in Graham & Perin, 2007a, 50% in Graham et al., 2012). From an examination of their reference lists it can be seen there is a considerable number of self-citations, which, in terms of evaluation of the research, could be considered problematic (Fowler & Aksnes, 2007).

Within academia the value of citation counts can be considered an indicator of a paper's quality or visibility. Fowler and Aksnes (2007) examined the incentives, from an author's perspective, to self cite their previous papers with the possibility of improved visibility and/or authority of their past work. Fowler and Aksnes' conclusions were that the benefits of self-citation were not relative to the paper(s), but to the author(s), hence providing an implicit incentive for academics to self-cite. They found authors' self-citations, may indirectly result, after 10 years, in an additional 40% of citations. With increased visibility comes the greater chance of citing by others. The influence of this situation on writing interventions being taken up by practitioners based on the sheer weight of citations instead of empirical evidence is not discussed or implied.

2.7 Outcomes of Writing Intervention Research

The conclusions and recommendations of the reviews by Graham and Perin (2007a) and Graham et al. (2012) were of particular relevance to this study. Both looked at all writing intervention studies with students in regular school settings in the period 1977 to 2011. The value of these two meta-analyses is they can provide evidence for a variety of effective tools that improve the quality of student writing, together with recommendations that are applicable to classroom practice across academic domains.

For both reviews the authors made a broad search of the literature for empirical and quasi-experimental studies implemented in regular school settings. They searched journals, dissertations and theses, books, conference papers and reference lists. The search yielded a considerable number of possible studies; however, applying further criteria (e.g., appropriate grade range, inclusion of a measure of writing, data available to enable

calculation of effect size) resulted in 123 articles (Graham & Perin, 2007a) and 115 articles (Graham et al., 2012) being identified.

Graham and Perin (2007a) note several areas of concern with regard to the studies included in their review. Their evaluations were based on the nine quality indicators proposed by Gersten, Fuchs, Compton, Coyne, Greenwood and Innocenti (2005). One of the concerns was that the theoretical bases for the study treatments were varied and overlapping, and in many studies the theoretical base was not even stated. Even where stated, many studies were influenced by social and/or cognitive approaches to writing and other theories were not given equal consideration. Some treatments had a greater research focus than others and not all treatments covered all grade levels.

To assist in the analysis of the treatments represented, the authors used the nine quality indicators of experimental and quasi-experimental design (Graham & Perin 2007a, p. 452). Graham and Perin (2007a) comment, "there is considerable room for improvement in the writing intervention research reviewed here" (p. 468). They reported concerns with a number of indicators: the random assignment of participants (apparent in 33% of studies), inclusion of instructor training (46%), pre-test equivalence (57%), teacher effects controlled (46%) and treatment fidelity (27%). The other five quality indicators were more positively addressed: mortality equivalence (80%), Hawthorne Effect (66%), type of control condition (84%) and ceiling and floor effects for the dependent measure (80%).

Graham et al. (2012) echo the concerns raised by Graham and Perin (2007a), that across the studies the quality of research was weak. Using the Gersten et al. (2005) indicators, the Graham et al. (2012) meta-analysis found 33% of the studies were true experiments, 29% established treatment fidelity and only 37% controlled for teacher effect.

From the systematic review by Graham and Perin (2007a), eleven practices were identified as being effective in supporting writing development (see Table 3). However, they emphasised the limitations of their findings, including the small number of studies conducted, the quality of included studies and the variety of measures of writing quality. Further, Graham and Perin state that these practices do not constitute a full writing program, but are flexible and can and should be combined in a variety of ways to ensure students' effective writing development.

Graham and Perin (2007a) also gave ten recommendations for classroom implementation. They stress, however, if they "were only able to draw one separate instructional recommendation … strategy instruction had a strong impact on improving the quality of these youngster's writing" (p. 467). They highlight that one strategy

intervention approach, self-regulated strategy development (SRSD) (Graham, 2006), yielded a strong effect size (1.57), stronger than all other forms of strategy intervention combined (0.89). The findings of this review in general were consistent with that of Hillocks (1986), including the finding that the only treatment with negative effect size (-0.32) was grammar instruction.

Graham et al. (2012) undertook a meta-analysis, with an interest in early intervention with students in years 1-6. Their analysis located thirteen writing treatments: six of explicit teaching, four scaffolding, one alternative (word processing), and two others (extended writing, comprehensive writing program) are outlined in Table 4. The thirteenth treatment, grammar instruction, was the only treatment with a negative effect size (-0.41). Again, they caution that these treatments do not constitute a full writing program.

Table 3

Eleven Elements of Effective Adolescent Writing Instruction

1. *Writing Strategies*, which involves teaching students strategies for planning, revising and editing their compositions
2. *Summarization*, which involves explicitly and systematically teaching students how to summarise texts
3. *Collaborative Writing*, which uses instructional arrangements in which adolescents work together to plan, revise and edit their compositions
4. *Specific Product Goals*, which assigns student specific, reachable goals for the writing they are to complete
5. *Word Processing*, which uses computers and word processors as instructional supports for writing assignments
6. *Sentence Combining*, which involves teaching students to construct more complex, sophisticated sentences
7. *Prewriting*, which engages students in activities designed to help them generate or organize ideas for their compositions
8. *Inquiry Activities*, which engages students in analyzing immediate concrete data to help them develop ideas and content for a particular writing task
9. *Process Writing Approach*, which interweaves a number of writing instructional activities in a workshop environment that stresses extended writing opportunities, writing for authentic audiences, personalized instruction, and cycles of writing
10. *Study of Models*, which provides students with opportunities to read, analyze, and emulate models of good writing
11. *Writing for Content Learning***, which uses writing as a tool for learning content material

Source: Graham and Perin, 2007a, p. 4

The meta-analysis of Graham et al. (2012) and the systematic review of Graham and Perin (2007a) support the effectiveness of six writing practices for students in Years 1-12.

These are strategy instruction, peer collaboration, product goals, pre-writing activities, word processing and process approach, with strategy instruction having the strongest impact on writing performance of all interventions researched. Graham et al. (2012) identified six additional practices for younger students: self regulation as part of strategy instruction, teaching text structure, creativity/imagery, text translation skills, teacher assessment of student writing and increasing writing time.

The writing intervention that was found to be the most effective (Graham and Perin, 2007a & Graham et al., 2012) was strategy instruction and self-regulation within SRSD (weighted ES 1.14). Previous meta-analyses of writing studies, 1985 to 2002, had also provided empirical support for SRSD (Graham et al., 2013b; Zito et al., 2007). SRSD is cited as an evidence based approach, that is user friendly, provides a focus on behaviour and motivational aspects, as well as the academics of writing (Ortiz & Reid, 2006). It is an approach to writing that research indicates results in positive writing outcomes within educational settings.

Table 4

Writing Treatment and Evidence-based Practices that Enhance Writing

	Recommended Evidence-based Practices
Explicit Instruction	1) teach strategies 2) add SR instruction to strategy instruction 3) teach students visual imagery or how to be more creative 4) teach structure and features of different text types 5) transcription skills eg handwriting, spelling, keyboard
Scaffolded	6) collaborative peer activities 7) set clear, specific writing goals 8) pre writing activities eg organising information 9) assessment and feedback
Alternative	10) word processing
Other	11) more writing time 12) ensure writing program is comprehensive

Source: Graham et al., 2012

A closer look at the 20 strategy instruction studies cited by Graham and Perin (2007a) and the 22 strategy instruction plus self-regulation studies cited by Graham et al. (2012) found a number of common characteristics. Studies primarily involved students at-

risk in writing. They were taught in small groups and received instruction outside of the mainstream classroom from a research assistant. For the majority of the 42 studies the research treatment was SRSD.

Of these 42 studies cited in these two reviews, only four were targeted at mainstream classes and included the class teacher(s) in the implementation (Anderson, 1997; De la Paz & Graham, 2002; Torrance, Fidalgo & Garcia, 2007; Tracey et al., 2009). Another study (Harris, Lane, Graham, Driscoll, Sandmel, Brindle, & Schatschneider, 2012) published after the two reviews were conducted, also involved a teacher implemented, whole class intervention. These studies address one of the recognised areas of difficulty for LD students, that these students "are not particularly adept at … spontaneously and effectively generalis(ing) the knowledge, skills and strategies" (Troia, 2002, p. 256) across time, instructional tasks and different settings and domains. One of the most effective means to address this difficulty is to integrate empirically validated approaches into general classroom practice by mainstream classroom teachers. These five studies took such an approach.

All five studies used an experimental and comparison class, with SRSD the experimental intervention. These studies ranged in size from 48 students and three teachers in one school (Anderson, 1997) to 262 students and twenty teachers in three schools (Harris et al., 2012). While most were conducted in an urban setting, one (Harris et al., 2012) was rural. Four studies were located in the USA with one (Torrance, Fidalgo & Garcia, 2007) conducted in Spain with Spanish speaking students. The study by Anderson (1997) involved a study population with high NESB (87%) from low socio-economic backgrounds (i.e., 85% of students with free/reduced lunches). All other studies involved students from middle class backgrounds and NESB was less than 6%. In the Anderson (1997) study the author was the special education teacher who team taught with the class teachers. In each of the four other studies class teacher professional development and high levels of support by the academic partner(s) were significant components of the studies. Pre-implementation workshops on SRSD were conducted and implementation manuals, scripted lessons and student materials were provided, as well as weekly meetings and classroom observations. All of these procedures provided structures that allowed for implementation of the treatment intervention to be consistent across classes and schools (i.e., heightened the implementation fidelity of the program).

All studies' measures included writing samples to establish writing quality, word count and story grammar parts. A measure of writing strategy use was included in two studies (Anderson 1997; Torrance et al., 2007) which used respectively, scoring of

planning notes and writing logs. Only one study, Anderson (1997) attempted to measure self-efficacy using an individually administered 31 question scale, an expansion on the Graham, Schwartz and MacArthur (1993) *Writing self-efficacy scale* (cited in Harris & Graham, 1996).

The Harris et al. (2012) study examined the effectiveness of the SRSD model being delivered by the class teacher for improving student writing. This study was large and comprehensive and implemented in three schools that already had an ongoing partnership with the university. Teacher training and support was extensive with two days of professional development in SRSD, provision of a detailed manual of lesson plans and student materials, and regular observation and support by university personnel. Again, this research intervention strategy heightened implementation fidelity and assisted in consistency of implementation across classes.

All studies reported positive improvements for a range of writing features: text quality and planning (Torrance, Fidalgo & Garcia, 2007); (narrative) text length, quality and structure (Tracy et al., 2009); (narrative) text structure and features, self efficacy (Anderson, 1997); (narrative) text elements and (opinion) quality and elements (Harris et al., 2012); (expository) text quality, length and planning (De la Paz & Graham, 2002).

The two meta-analyses endorsed the efficacy of SRSD as a classroom friendly model to support and develop the skills of struggling writers, while the five discussed studies present encouraging evidence as to SRSD's value as a whole class, teacher implemented intervention. The development and characteristics of SRSD will be discussed in the following section, and will inform the intervention for the following study.

2.8 Development of SRSD

From its inception in 1982, SRSD was conceived as an instructional model that was inclusive of students who struggled to acquire key writing skills. Graham and Harris (1999) were aware that students with learning difficulties required more explicit teaching. They felt that all students, especially those with learning difficulties, would benefit from an integrated instructional model that directly addressed their cognitive, behavioral and affect needs and strengths (Harris et al., 1997). Guided by research during the 1970s and 80s on the writing skills and knowledge of successful writers, as well as theories on self-efficacy, motivation, behaviour and social cognition, they incorporated these understandings into three major SRSD goals: to develop students' knowledge and understandings of the skills and strategies involved in successful writing; to develop students' knowledge to monitor and manage their own writing; and to foster students' motivation and self -efficacy about

writing and themselves as writers (ERIUOSEP, 2002; Graham et al., 2005, Harris & Graham, 1996; Harris et al., 1997; Harris et al., 2002; Harris et al., 2008b; Hoover et al., 2012; Milford & Harrison, 2010; Saddler, 2006). As well, they emphasised and explicitly integrated self-regulation strategies through all stages of the SRSD model (Zito et al., 2007).

Harris et al. (2008b) considered there was no single theory that addressed all the challenges faced by struggling writers. Hence, they felt there was a need to integrate research validated approaches that would support these students learning (Graham et al., 2012; Harris et al., 2008b), even if these approaches appeared to come from contradictory viewpoints (Harris et al., 1997; Harris et al., 2008b).

Harris et al. (2008b), Santangelo et al. (2008) and Zimmerman (1998) cite four theoretical sources that provided the initial foundation for SRSD, and that highlighted the integrated nature of strategies:

- Cognitive behaviour intervention model of Meichenbaum (1997):
- Soviet theorists' work on social origins of self-control and development of mind (e.g., Vygotsky):
- Deshler and Schumaker's research on strategy acquisition of students with learning disabilities: and
- Research on the development of self-control, metacognition and strategy instruction by Brown, Campione and colleagues (1981).

Over the last thirty years Graham and Harris and colleagues have been involved in considerable research on the development and evaluation of SRSD (Harris et al., 2008b). Today their work is still informed and shaped by multiple theoretical perspectives from social cognition and metacognition; cognitive behaviour; research into the development of written language and self regulatory practices; the expertise of skilled writers, motivation and self-efficacy, needs of students with LD and, of course, effective pedagogical practices (Harris et al., 2003; Harris et al., 2009; Santangelo et al., 2008). While there is other research looking at writing and self-regulation processes (e.g. Butler's Strategy Content Learning Instruction and Englert, Raphael and Anderson's Cognitive Strategy Instruction in Writing), this research does not appear to be as focused or extensive as that of SRSD.

Graham, Harris and colleagues have participated in and led SRSD studies with a wide range of participants (e.g., academic researchers, special and general education teachers with typically developing students as well as a wide range of special needs students). Studies have been implemented in grades from primary and high school to

tertiary institutions, and in diverse educational settings, both special education support classes and regular schools. In regular school settings studies have been implemented within mainstream classroom and resource settings, with whole class groups, small groups and single students (refer Appendix B). Of particular interest to this study are the five previously discussed whole class, class teacher implemented studies.

Since the impetus for the development of SRSD came from concerns for students with learning difficulties, much of the research has focused on at risk students in regular school settings. The majority of studies have been small group or one-on-one, often withdrawal mode, with specialist teacher or university researcher, and most participants have been students who struggle with writing. However, there are studies with students with EDBD (Little, Lane, Harris, Graham & Story, 2010; Mason & Shriner, 2008), ADHD (Jacobson & Reid, 2012), and autism (Asaro-Saddler & Bak, 2012; Delano, 2007). The Lushen, Ockjean and Reid (2012) study investigated the success of SRSD implementation by a paraeducator, one-on-one, with three fourth grade students identified with writing difficulties.

The principles of SRSD have been researched in studies in mathematics (Case, Harris & Graham, 1992; Kister, Rakoczy, Otto, Dignath-van Ewijk, Buttner & Kieme, 2010) and reading (Hagaman, Casey & Reid 2012; Mason, Meadan-Kaplansky & Taft, 2012). However, the principle curriculum area, with the most evidence based research, is that of writing. Many of these studies of SRSD and writing have been reviewed in meta-analysis studies published over the last decade.

2.9 Aims and Characteristics of SRSD

From its inception, the SRSD instructional model (Harris & Graham, 1996; Harris et al., 2008b) aimed to support students in becoming confident, independent managers of their writing processes. Students were assisted to develop an understanding of how to use learnt skills and strategies in different settings and for different purposes (Tracy et al., 2009). The underlying premises of SRSD are to focus on the development of self-regulation, to directly and strategically address the cognitive, behavioural and affective needs of students and to integrate manifold theoretical perspectives within the instructional model (Harris et al., 2008b; Zito et al., 2007).

What is implicit in these premises is that for all students who are experiencing difficulties there should be a recognition that they, relative to their peers, require more structured, focused and, often, more extensive explicit instruction to develop the necessary understanding, skills and strategies (Helsel & Greenberg, 2007). Also it is recognised that

instruction should be adjusted to meet the students' needs (i.e., a need for individualised attention) (Harris et al., 2003; Helsel & Greenberg, 2007). However, this instruction must be provided within an integrated literacy curriculum (Harris & Graham, 1996).

Harris, Graham and Mason (2005) and Graham et al., (2013) emphasise the need for identifying effective instructional practices. Several meta-analysis studies of writing intervention literature (e.g., Graham et al., 2012; Graham & Perin, 2007a) have been carried out to identify the most effective instructional practices for teaching writing to students in Years 1 to 12.

Harris et al. (2003) articulate the following characteristics as essential to the implementation of effective SRSD instruction. These include the collaborative nature of the instruction and learning between teachers and students (Ortiz Lienemann & Reid, 2006), and the class teacher's initial provision of support and modelling but with the aim for students to take responsibility to self regulate and monitor their own learning (Mason et al., 2012; Helsel & Greenberg, 2007; Tracy et al., 2009). Also, instruction is individualised according to each student's needs, which does not necessarily imply one-on-one instruction but does mean that such aspects as the students' strengths and areas of need are vital considerations for successful implementation (Helsel & Greenberg, 2007; Milford & Harrison, 2010). There is the requirement that each student be given the time to pass through the stages at his/her own pace, not that of some arbitrary timetable set by, for example, the teacher.

The class teacher plays a vital role in the successful implementation of SRSD. It is the class teacher who leads and supports the students' growth in skills, knowledge and confidence (Harris & Graham, 1996). They are instrumental in helping students see the value of different strategies (i.e., strategy strengths and weaknesses), as well as helping facilitate students' understanding of how and when they can, and should, use particular strategies.

Harris et al. (2003) also provide a range of ideas for practitioners to use when assessing the method and procedures of SRSD. They suggest evaluating such aspects as student engagement, student use of taught strategies and their maintenance and generalisation of strategy use.

2.10 SRSD Stages and Strategies

As stated, SRSD is not a prescriptive program nor designed as a complete package (Graham & Perin, 2007a; Harris et al., 1997; Taft et al., 2011), but is a flexible teaching approach that has developed out of established, well-researched educational and

psychological theories. As a flexible framework it can be used across curriculum areas and in diverse educational settings showing potential for assisting a diverse range of at risk students (Taft et al., 2011). Studies have found that all writers can benefit from SRSD (De la Paz & Graham, 2002; Harris et al., 2008b; Schumaker & Deshler, 2003; Zumbrunn & Bruning, 2013).

SRSD's effectiveness can be put down to its focus on the teaching of strategies, especially strategies to promote self-regulation (Milford & Harrison, 2010). The six recursive stages of SRSD, which will be discussed further in the Methodology chapter, provide teachers with a validated instructional approach on which to base their teaching. The majority of studies examining SRSD have been for writing; however, SRSD could be applicable to a multitude of teaching scenarios (e.g., teaching study skills, social skills, driving skills, even golf swings).

The SRSD stages should be viewed as general guidelines that the teacher can reorder, revisit, recombine, modify or delete according to the needs of students or the teacher. The stages provide the 'how' to teach, while the key elements of 'what' to teach are explicit in its name, strategy development. The purpose of a strategy is to improve performance by providing a plan of explicit, structured instructions that a person consciously undertakes to achieve a goal (cognition) (Reid & Ortiz Lienemann, 2006; Saddler, 2006; Santangelo et al., 2008). Strategies involve procedural knowledge, the 'how to' needed to achieve a desired goal (Graham & Harris, 2005). They can be such supports as graphic organisers and mnemonics, but can also refer to cognitive processes such as verbal rehearsal and visualisation. Strategies assist as they simplify and organise complex tasks, they define a course of action and make mental operations concrete and visible (Graham & Harris, 2005; Saddler, 2006; Santangelo et al., 2008). From research, the use of such effective strategies together with learning to self-regulate behaviours, results in more sophisticated writing (Chalk et al., 2005; Troia & Graham, 2003).

In SRSD, not only are students taught topic specific strategies but also the self-regulatory behaviours to remember and to track the use of these strategies, and to make decisions about the appropriateness of the strategy to the task (i.e., metacognition). Using metacognitive self-regulatory strategies means students can plan, monitor and control their own learning (Postholm 2011; Schraw et al., 2006). Effective self-regulation and performance (Harris et al., 2008a; Ley & Young, 2001) require the development of the concept of self-talk and associated metalanguage. Forms of self-regulatory behaviours are self-instruction (e.g., 'This writing needs lots of good descriptions so I need to remember descriptive words while I'm writing.'), goal setting (e.g., 'I am going to include six

effective descriptive noun groups in this story.'), self-monitoring (e.g., during writing, 'Remember descriptive noun groups and verbs!') and self-reinforcement (e.g., 'I like my use of descriptive words in this writing').

Strategy and self-regulation instruction can benefit struggling learners as they promote knowledge transformation and require the students to be actively engaged with the task. They also enable students to become more aware of task requirements, more strategic in their approach (Saddler & Asaro-Saddler, 2013) and perhaps more able to construct and personalise the strategy to suit their needs (Postholm, 2011). The text by Graham and Harris (2005) discuss a wide range of writing and self-regulatory strategies within a variety of educational contexts.

2.11 Need for Broader Perspective

Schunk (2005) raised a pertinent point in relation to self-regulation studies that has relevance for studies of SRSD. He commented that most of the research on self-regulation was carried out in North American settings hence there was a real need for research in other countries and cultures to determine how self-regulation principles could generalise across student groups and multicultural populations. This point is especially compelling, as he noted the growing diversity in classrooms and the challenges this presents teachers. His observation could also be applied to the papers located from extensive literature searches for this study. While the majority are from North American settings and North American academics, a very small number of studies implementing SRSD have been located outside the USA: Glaser and Brunstein (2007) in Germany, Mourad (2009) in Egypt and Torrance et al. (2007) in Spain. No studies were located within Australia.

The other aspects that this review has highlighted are that for most studies the focus is on identified students at-risk and that research implementation took place outside the classroom, by research assistants with individual students or small groups. The five studies that have targeted regular classes and included the class teacher(s) in the implementation present evidence as to the value of using SRSD in a whole class context.

The measurement tools the five studies used to assess improvements in writing and confidence were mainly student writing samples. For this study the writing samples used were linked to NAPLAN, the nationally implemented test for reporting on Australia wide literacy levels. Two surveys (Harris & Graham, 1996) were used to gain insights into students' self-efficacy and self-regulatory behaviours (Appendices D and F).

An impetus for this study was the limited research on SRSD beyond those working with Graham and Harris or beyond USA based studies, and the focus in most studies on

students receiving special education services. This study hopes to add to the findings of the five discussed studies, as well as address the issue raised by Schunk (2005), by investigating the relevance of the SRSD instructional approach within an Australian mainstream educational setting, in a classroom comprised of students with a diversity of backgrounds.

2.12 Research Question

The main question being asked in this research is: to what extent does using the SRSD instructional model to teach an Australian mainstream Year 5 class the knowledge and strategies essential in narrative writing enhance students' writing?

This study will address this question by investigating the following.
For students in a Year 5 Australian class, to what extent does the SRSD model of instruction lead to:

   1.1 improvements in their writing skills and abilities?

   1.2 changes in their attitudes to writing and beliefs in themselves as
      writers?

   1.3 an enhanced understanding of the knowledge, skills and strategies of the
       writing process?

   1.4 an increased awareness of the self-regulatory behaviours used by expert writers?

Chapter 3
METHODOLOGY

This study was conducted to investigate the effects on writing of the instructional model SRSD, when implemented within an Australian mainstream classroom. Previous chapters have reviewed the difficulties many students have with writing and the life-long impact poor writing skills can have. Current research looking at approaches to writing has indicated that SRSD is one of the most validated in its effectiveness, but despite this, no studies have been located within Australia. This chapter discusses the study research method, its design, including setting and participants, the dependent variables, the instructional intervention and procedure.

3.1 Design

A mixed method quasi-experimental approach was used for this study. Mixed method research "involves the use of more than one approach to or method of design, data collection or data analysis within a single program of study …" (Bazeley cited in Johnson, Onweuegbuzie & Turner, 2007, p. 119). In this study, the concurrent collection of quantitative and qualitative data permitted the researcher to provide a better understanding of the learning that takes place as a result of SRSD (Creswell, 2012).

The mixed method design allowed for a statistical analysis of quantitative data from student surveys and the standardised NAPLAN assessments. These data provided specific measures of student writing, and writing confidence and efficiency. Writing outcome data was collected pre and post-test, and 15 weeks after the completion of the intervention. As a result, a 2 (group) by 3 (time) repeated measures design was used. Group (treatment and comparison) was the between-participants factor, and time was the repeated measure (pre-intervention, post-intervention and 15 week follow-up).

The qualitative data from interviews and open-ended questions provided students with the opportunity to express their views about aspects being investigated by this research. That is, they were able to articulate their beliefs and understandings of both the writing process, and the cognitive processes they developed and used to complete writing tasks. This feature of the project was found to be limited or not present in many of the studies reviewed.

3.2 Setting and Participants

The research was conducted in two primary schools within the Sydney metropolitan area. The schools were comparable in demographics and size (i.e., treatment school 378 students, comparison 525). Both schools cater for a high proportion of students from a language background other than English (LBOTE) (i.e., treatment school 90%, comparison 83%) and both receive Priority Schools Program (PSP) funding indicating their school communities are within low socioeconomic areas.

Both schools were similar in their organisation of classes. Rather than classes arranged in Years 1 through to 6, their organisation was in stages, with Stage 1 being Years 1 and 2; Stage 2 Years 3 and 4; and Stage 3 Years 5 and 6. This meant it was not possible to use an intact class year group, since stage organisation resulted in each class being a composite of students from two-year levels. In order for the study to be more focused in terms of age, skills and educational expectations, the intervention and comparison groups were narrowed to students in Year 5. Also, it was felt that by Year 5, students have begun to develop a range of writing skills, have an awareness of the purpose of writing and their role in the process, and, would be working towards skills inherent in the ability to self-regulate behaviour (Davis & Neitzel, 2011).

Undertaking the study with Year 5 students allowed for data from the National Assessment Program for Literacy and Numeracy (NAPLAN) to be used. These data are nationally recognised, and would provide validity to results reported as data was generated through a mechanism approved by government agencies, as well as being technically robust through the large scale trials of the NAPLAN measures.

The intervention and comparison groups both comprised Year 5 students who volunteered to be in the study. One student in the treatment cohort left the school during the intervention period, so that 59 students were included in the final analysis. Table 5 presents the demographic overview of the two groups. Both groups show equivalence for age and LBOTE and a slight difference is represented in gender. Despite the narrowing of selection to Year 5, within both groups there was a range of ages, 109 months to 136 months.

Table 5

Demographics of Intervention and Comparison Groups

	Cohort size	Male	Female	Average age	ESL	LBOTE
Intervention Group	29	18	11	126 months	20	26
Comparison Group	30	14	16	125 months	18	24
Total	59	32	27		38	50

ESL: English as second language
LBOTE: language background other than English

The study involved two teachers (Treatment class and comparison class) and the researcher. The Treatment class teacher was very positive about being involved in the study as it fitted in with the school's preparation for the writing component of NAPLAN assessments. Knowing her students well, she played an active part in the discussions as to the curriculum content (i.e., Stage 3, NSW Board of Study English syllabus) to be taught and the writing strategies and behaviours she felt would benefit her students. She was also aware how vital pedagogical practice was in enhancing student learning, indicating interest in the SRSD instructional model.

Professional development was one of the proposed components of this research study. The initial proposal was that prior to implementation in the classroom, the researcher would run SRSD professional development sessions with the class teacher and other interested staff. Due to time constraints this did not occur. The content of each of the thirteen lessons was the result of discussion with the class teacher however most input was from the researcher. Both class teacher and researcher participated in classroom implementation, sharing the teaching role.

While the regular class teacher for the Comparison group agreed to take part in this study, it transpired that a relief teacher took the writing period, not the regular class teacher. The relief teacher did not consent to participation in the study, and although she accepted the students' involvement, she was unavailable for any comments about her writing program.

3.3 Measures

The measures used in this study aimed to examine various aspects of the knowledge and understandings associated with expert writing. A range of measurement tools (survey, interview, writing samples) was used to assess the same variable, hence increasing

reliability by providing multiple measures of the same construct (Neumann, 2006). An overview of the measures used is shown in Table 6.

Table 6

Overview of the Dependent Variables and Instruments

Dependent Variables	Evidence	Instruments (pre, post and maintenance)
Writing improvement	Four criteria of NAPLAN writing	NAPLAN writing criteria Appendix C
Writing understandings	Use of metalanguage to discuss skills and strategies of 'good' writers. Skills & strategies such as revising, purpose of text	*Student Self-Efficacy Survey* Appendix D Student interview Appendix E
Writing confidence	Self report on engagement and participation in class writing time, attitude to writing, motivation	*Student Self-Efficacy Survey* Appendix D Student interview Appendix E
Self-regulatory behaviours	Demonstration and self report on behaviours of self-monitoring, self-instruction, goal setting	*Writing Process Checklist* Appendix F Student interview Appendix E

3.3.1 Writing improvement. The writing improvement task used the protocol for the Australian National Assessment Program – Literacy and Numeracy (NAPLAN) (Appendix C) as it is one of the measures schools use as part of their assessment of students' writing abilities.

O'Neill (2012) discusses NAPLAN in terms of Bachman and Palmer's, (1996) six qualities of a good test: authenticity, reliability, construct validity, impact, interactiveness and practicality. O'Neill notes authenticity presents difficulties for any large scale testing, such as NAPLAN, as by its nature, it becomes more removed from classroom practice. However, she considered the NAPLAN writing task addressed the other five qualities well, as it has been developed from several years of research, is well resourced, draws on established large scale testing expertise and demonstrates links to curriculum and ongoing research.

NAPLAN assessment criteria cover curriculum based content relating to writing texts and text genre. There are ten items, of which four cover text structure and purpose (criteria 1-4: audience, text structure, ideas, character and setting) and six address text features (criteria 5-10: vocabulary, cohesion, paragraphs, sentence structure, punctuation,

spelling). NAPLAN aims to assess students' writing skills in line with English curriculum outcomes allowing teachers to use NAPLAN data to guide their classroom programming and to more effectively address demonstrated student needs. Transparency is shown in administration and marking via annotated sample scripts and marking rubric. Considerable effort has been made to make NAPLAN results accessible and easy to interpret for all stakeholders.

The students in the study were instructed to produce a writing sample, in this case a narrative, using stimulus material from the New South Wales Basic Skills Tests. Similar to NAPLAN 2010, the writing task was a narrative in response to a picture stimulus with a given short beginning paragraph. For the pre and maintenance writing samples, the standardised NAPLAN test instructions were used. Students were given five minutes planning time, thirty minutes writing time and five minutes editing time. For all testing material the examiner read aloud the instructions written on the test material.

Scoring followed NAPLAN guidelines as set out in the marking criteria (Appendix C). Since not all ten criteria were addressed during the intervention program the decision was made to analyse only the four that were a focus of writing improvement (i.e., text structure, character and setting, ideas, vocabulary). These items have a scoring rank range from 0 – 4 for text structure, character and setting and 0 – 5 for ideas and vocabulary. To assist in scoring, the researcher referred to the NAPLAN instruction manual which sets out descriptors for each of the items as well as providing examples of annotated, scored writing samples. Marks for all pieces of work were recorded on an Excel spreadsheet.

3.3.1.1 *Inter-rater reliability*. Inter-rater reliability was carried out for the writing assessment task, by an inter-reliability marker who was an experienced teacher with knowledge of NAPLAN and experience in marking high stakes tests.

The study included 118 writing samples: 30 pretest and 30 maintenance samples for the comparison group, and 29 pretest and 29 maintenance samples for the experimental group. Inter reliability was assessed by the second marking of six randomly selected writing samples from each schools' pretest and maintenance test papers (i.e., 24 papers). For this study, data from four of the ten NAPLAN marking criteria were analysed. Hence, inter-rater agreement could be assessed using 96 items (24 papers x 4 criteria items). Inter-rater agreement was found on 71 of the 96 items, or 74% agreement.

3.3.2 Writing confidence and understandings. A key aim of this study was to assess students' understandings of the writing processes and strategies, and their levels of confidence (i.e. self-efficacy), in their writing abilities. Research strongly advocates these two areas are influential factors in successful writing (Graham et al., 2013b; Helsel &

Greenberg, 2007; Mason et al., 2011b; Saddler & Asaro-Saddler, 2013). However, in many study designs the measures used to assess either area are not given or are not clearly documented.

In this study information for these two dependent variables was to be extrapolated from two sources: the student survey and the student interviews. The questions in the *Student Self-Efficacy Survey* (Appendix D) were adapted from the *Writing self-efficacy scale* (Graham, Schwartz & MacArthur, 1993, cited in Harris and Graham, 1996, p. 228). This scale was developed out of research on writing self-efficacy and has been used in other research (e.g., Anderson 1997; Graham et al., 2005). The ten questions use a three point Lickert scale format to provide a measure of students' beliefs about their writing and themselves as writers. The two open ended questions in this survey provided an opportunity for students to comment on their understanding of the skills that their support writing. Scores for the ten self-efficacy questions were coded for analysis using SPSS, and the two open ended questions provided qualitative data to add to the discussion of student understandings of writing strategies. As with both NAPLAN and the *Writing Process Checklist* (Appendix F), it was administered whole class to both groups using the standardised instruction provided with the assessment.

The student interview schedule (Appendix E) was developed to assess aspects being investigated by this research. Six students were randomly selected to participate in the small group interviews. Semi-structured interview questions addressed self-efficacy (questions 1,2,3,4,9,10) and the writing behaviours and strategies (questions 5,6,7,8,11 , 12,13) explicitly taught and practised in the intervention. The aim was to tease out students' personal attitudes to writing, their perceptions of good writing, and self-evaluations of their own writing. These semi-structured interviews also provided all participants the opportunity to discuss any aspects they deemed important about writing and the writing process.

All interviews were undertaken by the researcher and audio-taped. Small groups met in a vacant classroom, where the researcher assured student about the privacy of the interview. Following the interviews, these recordings were transcribed verbatim.

3.3.3 Self-regulatory behaviours. Self-regulation is a significant factor in successful learning (Schraw et al., 2006; Schunk, 2005; Zito et al., 2007) and successful writing (Ferrari et al., 1998; Graham et al., 2012, Helsel & Greenberg, 2007). One of the underlying premises of SRSD is that students become independent managers of their own learning and for this they need to develop the skills and understandings possessed by self-regulated learners (Harris et al., 2002; Saddler, 2006).

The *Writing Process Checklist* (Harris & Graham, 1996) was used to assess students' self-regulatory behaviours (Appendix F). The 21 item checklist has a "yes"/"no" format and was administered whole class by the researcher who read items aloud to the students. They recorded answers with a tick or cross for each statement on the record sheet. Analysis of the 21checklist items was based on the seven categories in the *Writing Process Checklist* (Harris & Graham, 1996, p. 165). Student scores were coded in an Excel spreadsheet, then the questions relevant to each of the categories (i.e., understanding the task, planning, seeking and organizing information, writing, revising, seeking assistance and motivation), were summed and the data imported into SPSS for analysis.

3.4 Intervention

3.4.1 Treatment. The study's intervention was the implementation of the SRSD instructional model, which comprised of three inter-related components. The integrated nature of these components is one of the strengths of SRSD. A second strength is that the six stages provide effective teaching practices for scaffolding student learning. A third, and essential, strength is its recognition of the importance and value of explicitly teaching not just content, but also the associated skills, knowledge and strategies required to achieve successful learning.

3.4.1.1 The six stages of instruction. The first component of the SRSD model is the six stages of explicit instruction, and the following provides an overview of these stages for a writing program (Graham, Harris & Troia, 1998, Ortiz Lienemann & Reid, 2008):

1. *Develop and activate background knowledge* focuses on any background knowledge or prior learning that students need in order to understand, learn and apply to writing a narrative, together with any relevant self-regulation behaviours, to be reviewed and developed during this stage. This background knowledge needs to be developed to allow students to move on to the later SRSD stages.

2. *Discuss it* involves discussing the purpose and form of writing and self-regulation strategies. Teacher and students discuss the strategies being learnt, their benefits, goals, when to use them and how they will be used. Recognition that the strategies can be utilized beyond a particular scenario introduces the ideas of generalisation of learning. Evaluation of students' current level of performance of writing is often made at this stage.

3. *Model it* means that the teacher or student(s) models how to use the writing strategies and self-regulation procedures. At this stage it is ideal to use talk aloud self-statements, e.g. self instructions, to make explicit the necessary skills and understandings brought to the writing process. Also self-monitoring and goal setting should be part of the

modelling of self-regulation procedures. Writing strategies such as mnemonics or graphic organisers need to be explicitly modelled and linked to the writing outcome.

4. *Memorise it* necessitates the students taking action to memorise procedural steps for using writing strategies and self-regulation procedures. Here the focus is for the students to be fluent in their use and understanding of the strategy's steps. The aim is that, like expert writers, their use of taught strategies becomes part of their writing repertoire.

5. *Support it* provides students with temporary and adjusted assistance to apply writing strategies and self-regulation procedures. The aim of this stage is for the teacher to provide sufficient support so the students can work towards the next stage where they can use the strategies effectively and independently.

6. *Independent practice*, where students are encouraged to use the writing and self-regulation strategies independently and the teacher monitors performance.
These SRSD stages were used to develop the teaching program, providing a structure into which the writing and self-regulation strategies were embedded in a systematic and explicit way.

3.4.1.2 Cognitive strategy instruction. The second component comprises the cognitive strategies to be taught within the six stages. These strategies are a range of self-regulation strategies and strategies appropriate to the topic content. It has been proposed that instruction in writing and self-regulation strategies provides students with the tools required to become better writers (Graham & Harris, 2005). SRSD is an instructional approach that provides a framework in which these writing and SRL strategies can be taught. The two focus areas of cognitive strategy development in this study were: (i) to build on students' knowledge of story structure and vocabulary in order to write a more sophisticated narrative, appropriate for Stage 3, and (ii) to develop the self-regulatory skills required to manage and monitor writing behaviours and understandings. These writing and self-regulation goals were addressed in a number of ways. The strategies taught took the form of mnemonics and graphic organisers, personal checklists and class teacher talk aloud modelling of self talk. A number of the self-regulating and narrative writing strategies used in this study have been used in previous studies (Anderson, 1997; Harris, Graham & Mason, 2006; Saddler, 2006; Tracey et al., 2009).

To develop more sophisticated story writing, the graphic organiser (Appendix G) and mnemonic for a narrative story plan, OCR (Orientation, Complication, Resolution) and optional coda, was expanded to specifically embrace the story element of 3Ws, 2Whats and 2Hows. Students were introduced to the idea that not only did the Orientation require information on who, when, where (3Ws) but the Complication needed to include What the

characters do or want to do, and What happens (2Whats), while the Resolution needed to include How did the characters feel, How did it end (2Hows). The second writing strategy taught also built on the OCR story plan by introducing the idea that stories, to add interest, have both major (i.e., big C) and minor (i.e., little c) complications plus major and minor (R, r) resolutions. Hence a story profile could be OCcrcR.

As well as a focus on text structure (story plan) there was also a teaching focus on the text feature of building more interesting sentences by building noun groups. The explicit strategies used were the graphic organisers, vocabulary clines and the noun group structure (Appendix G). These aimed to extend students' ability to build word pictures in order to add interest and make their stories more engaging for the reader.

The second focus area was self-regulation. Although Zimmerman (1998) views self-regulation as having three components with a number of dimensions (1998, p. 4), there are four main self-regulatory behaviours emphasised in the work on SRSD and writing (Harris et al., 2008a) These are: self-instruction (e.g., "This writing needs lots of good descriptions so I need to remember descriptive words while I'm writing."); goal setting (e.g., "I am going to include six effective descriptive noun groups in this story."); self-monitoring (e.g., during writing "Remember descriptive noun and verbs!"), and self-reinforcement (e.g., "I like my use of descriptive nouns in this writing").   Self-regulation training was implemented using the generic strategies, the POWER mnemonic (**P**ick my ideas, **O**rganise my ideas, **W**rite it, **E**dit it, w**R**ite more but better), and the personal checklist *What I do Before/During/After I write,* both of which incorporate goal setting, self-instructions and self-monitoring statements. Over the seven weeks, the students built up a personalised *Good writers use POWER* booklet (Appendix G). All strategies and associated practice activities were added to this booklet.

The other strategy used was Talk Aloud, where the teacher verbalised the metacognitive processes used when planning, revising, goal setting, selecting ideas and strategies. During all lessons the teachers used talk aloud self-talk to make apparent to the students the internal thinking (metacognition) required while working on tasks. This was to explicitly model for students the internal self-talk that would assist them to self regulate actions and ideas during the writing processes.

3.4.1.3 Syllabus content instruction. The third component is the syllabus content to be taught. As stated in chapter 2, the six stages guide the 'how' to teach. The 'what' to teach is both the topic content, and the self-regulation and content specific strategies that will support student learning. In all effective programming the starting point is the relevant educational syllabus content, in this case, narrative writing at a Stage 3 level. The

selection of writing and self-regulatory strategies was guided by the teacher's professional knowledge and understanding of her students.

Decisions about lesson content were the result of discussion with the class teacher regarding syllabus guidelines and strategies required for successful narrative writing at a Stage 3 level. The planning pyramid (Schumm, Vaughn and Leavell, 1994) was used to plan the teaching topic focus areas (Appendix H). Then decisions were made about the required writing and self-regulated strategies to support the teaching and learning. The curriculum content and the selected strategies were to be taught within the SRSD six stages. The recursive, descriptive nature of the stages meant that teaching decisions were made at all times based on the most relevant of the six stages to be used (refer to sample lesson plans Appendix I).

Instruction in writing and self-regulation strategies provides students with the tools required to become better writers (Graham & Harris 2005). The value of SRSD is that it provides a structure that increases strategic knowledge about writing by explicitly and systematically teaching the more sophisticated writing and self-regulation strategies associated with successful writing.

3.4.2 Comparison. During the period of this study a relief teacher took the class writing period. The relief teacher did not consent to participation in the study and was unavailable for any comments regarding her writing program or for classroom observations. The comparison class writing program would have addressed outcomes from Stage 3 in the NSW Board of Study English syllabus. As endorsed by the school the classroom practices followed the DET approach to teaching of modeled, guided and independent.

The relief teacher followed the current DET approach to teaching of writing by text types as described in the English K-6 syllabus (BOS, 2007, pp. 60-61) and guided by the English K-6 Modules (BOS, 1998). These documents provide explicit information regarding the stage appropriate structure and grammatical features of different text types. Information on narrative writing at Stage 3 (English K-6 Modules 1998, pp. 203-211) guided the writing lesson in both the treatment and comparison group (refer *3.4.1.3 Syllabus content instruction* and Appendix H). The focus text type in the comparison class was the narrative text. The researcher was unable, however, to establish what specific professional framework (e.g., SRSD) the comparison teacher applied in interpreting the DET syllabus guidelines.

3.5 Procedure

Following ethics approval by The University of Sydney Human Research Ethics Committee (Appendix J) and the NSW DEC (SERAP), the treatment school, which had previously indicated willingness to be involved, confirmed its participation. The DEC suggested a comparison school that was demographically similar to the treatment school. This school also consented to be part of the study. After discussion with the two principals and participating teachers, parent/guardian consent for student participation was requested (Appendix K) and forms collected. In each school the first 30 students to return the parent consent form formed the study cohorts.

Prior to pretest administration, the *Student Self-Efficacy Survey*, the *Writing Process Checklist* and the interview questions were piloted with Year 5 students. Their reliability was examined and improved by administration and post-administration discussion and changes were incorporated (Neumann, 2006).

Pre-assessment was conducted with both study cohorts a fortnight before the commencement of the intervention program. Pre-test data for participants in the treatment and comparison groups were collected for each of the four variables. These data were from student interviews and the *Writing Process Checklist*, *Student Self-efficacy Survey* and writing samples (refer to Table 6 for assessment instruments). The intervention (implementation of SRSD model) with the treatment group took place in fourteen lessons over a seven-week period. At the completion of the intervention, post-test data for both groups were provided by the NAPLAN writing test. Maintenance testing was conducted three months after the conclusion of the intervention.

3.6 Conclusion

This chapter provides a detailed discussion of the methodological approaches and decisions made in regard to study design, measurement instruments and implementation of the intervention. The study design is a quasi-experimental mixed method, with a seven-week intervention program and repeat measures (pre, post and maintenance) implemented over a 25 week period. Assessment of the four variables being observed was by means of survey and interview with evidence also demonstrated by improvements in writing samples. The analysis of these instruments was carried out using SPSS with full details of analysis and results provided in the following chapter.

Chapter 4
RESULTS

This study used a mixed method design to examine changes in four aspects of writing resulting from students completing fourteen lessons in the use of self-regulated strategy development in writing. The four aspects of writing (e.g., writing improvement, writing self-efficacy, use of self-regulatory behaviours, understanding of the writing skills and strategies) were identified in the literature as those used by expert writers. To identify changes in writing a variety of analysis models were used, depending on the levels of measurement.

Writing improvement was examined on four NAPLAN writing criteria. Data on each criteria (i.e., text structure, ideas, character and setting, vocabulary) were analysed separately using a mixed between-within subjects analysis of variance. A paired sample t-test was carried out to further investigate main effect for time for both groups. Self-efficacy survey data were analysed using descriptive statistics and a mixed within-between subjects analysis of variance. Qualitative data were used to discuss changes in student understanding of writing and self-regulatory skills. Descriptive statistics and graphing of mean scores as well as student responses from the small group interviews were utilised when considering self-regulated behaviours. The following is a full discussion of measurement models and results for these four writing variables.

4.1 Writing Improvement

Improvement in writing was assessed using the Australian nationally administered NAPLAN test for writing. This test has ten criteria (refer to Appendix C) that cover writing skills at text structure level (i.e., audience, text structure, ideas, character and setting) as well as text features (i.e., vocabulary, cohesion, paragraphs, spelling, punctuation, sentence structure). This research study addressed only the four criteria that pertained to writing skills at a text structural level (i.e., text structure, ideas, character and setting, vocabulary).

The SPSS models selected to analyse the data were descriptive (i.e., means and standard deviations) and a mixed between-within subjects analysis of variance (ANOVA). A 2(treatment) x 3(time) repeat measures ANOVA design was used to assess the impact of the two treatments (Treatment, Comparison) on participants' scores for overall NAPLAN criteria and on each of the four selected NAPLAN criteria (i.e., text structure, ideas, character and setting, vocabulary) across three time periods (i.e., pre-intervention, post-

intervention and fifteen week follow-up). Due to two students' exemption from the
national testing (i.e., the post-intervention), data for these students were not included in
these analyses. Therefore, the Treatment group comprised 29 students and the Comparison
group 28 students. The five sets of analyses will be discussed separately and data
presented in table and graph format.

4.1.1 Writing Criteria: Text Structure

Mean scores and standard deviations for both groups are presented in Table 7 and
means are shown in Figure 1. The Treatment group results show considerable increase in
the use of text structure elements from pre-intervention writing samples to post-
intervention writing samples. However, post-intervention gains were not maintained in the
fifteen-week follow-up results. The Comparison group demonstrated considerably less
gain during the study intervention period. However, over the post-intervention time, they
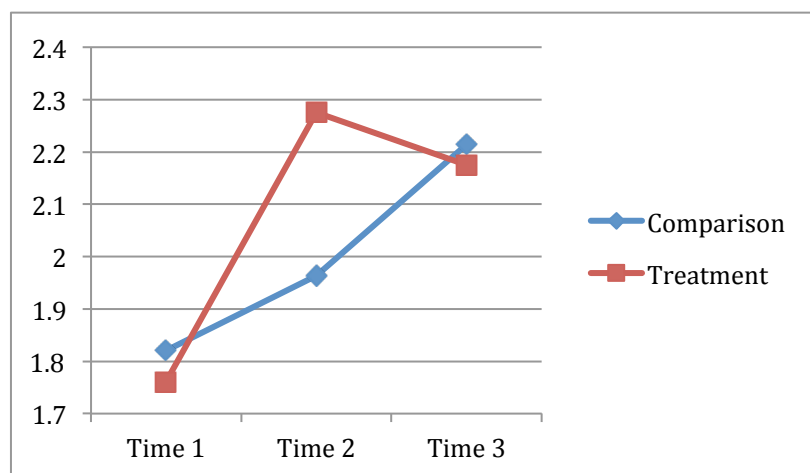demonstrated continual improvement.

Table 7

Text structure: Means and Standard Deviations across Three Time Periods

	Treatment		Comparison	
Time period	M	SD	M	SD
Pre-intervention	1.76	.636	1.82	.476
Post-intervention	2.28	.649	1.96	.692
15 week follow-up	2.14	.581	2.21	.498

Figure 1

Means scores for Text Structure across Three Time Periods

The mixed between-within subjects' analysis of variance was conducted to assess the impact of the two treatments (i.e., Treatment, Comparison) on participants' scores on the NAPLAN criteria for text structure across three time periods (i.e., pre-intervention, post-intervention and fifteen week follow-up). There was no significant interaction between program type and time, Wilks' Lambda = .935, $F(2, 54) = 1.88$, $p = .16$, partial eta squared = .065. However, the main effect for time was statistically significant, Wilks' Lambda = .626, $F(2, 54) = 16.15$, $p < .0005$, partial eta squared = .374, a large effect size (ES), with the Treatment groups showing an increase across the first time period and decrease across the second time period. The Comparison group improvements were across both time periods. The main effect comparing the two types of intervention was not significant, $F(1,55) = .253$, $p = .617$, partial et squared = .005, suggesting for text structure no statistically significant difference in the effectiveness of the two teaching approaches.

4.1.2 Writing Criteria: Ideas

Table 8 and Figure 2 present the mean scores and standard deviations for NAPLAN criteria Ideas. Both groups show gains from Time 1 to Time 2 with the Treatment group demonstrating greater gains than the Comparison group. The Comparison group demonstrates continual improvement post intervention, while the Treatment group shows no gains post intervention.

A repeat measures ANOVA design was used to assess the impact of the two treatments (i.e., Treatment, Comparison) on participants' scores on the Ideas criterion, across three time periods (i.e., pre-intervention, post-intervention and fifteen week follow-up). There was no significant interaction between program type and time, Wilks' Lambda = .972, $F(2, 54) = .787$, $p = .46$, partial eta squared = .028. However, main effect for time was statistically significant, Wilks' Lambda = .727, $F(2, 54) = 10.12$, $p < .0005$, partial eta squared = .273, with Treatment group showing an increase across the first time period and the Comparison group showing improvements across both time periods. The main effect
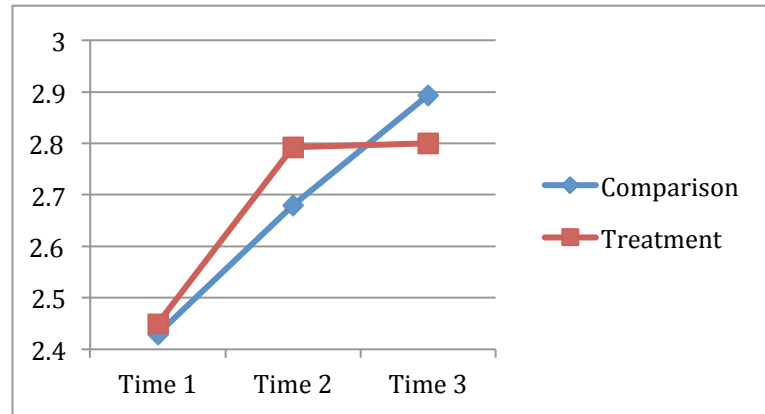
Table 8

Ideas: Means and Standard Deviations across Three Time Periods

Time period	Treatment		Comparison	
	M	SD	M	SD
Pre-intervention	2.45	.736	2.43	.573
Post-intervention	2.79	.62	2.68	.548
15 week follow-up	2.80	.675	2.89	.567

comparing the two types of intervention was not significant, $F(1,55) = .008$, $p = .929$, partial eta squared = .000 , suggesting no statistically significant difference in the effectiveness of the two teaching treatments.

Figure 2

Means scores for Ideas across Three Time Periods

4.1.3 Writing Criteria: Character and Setting

Descriptive information for both groups is presented in Table 9 and the mean scores are shown in Figure 3. Results over the three time periods show a greater increase in mean score for the Treatment group from pre to post-intervention than for the Comparison group. The Treatment group pre-test score was considerably lower than the Comparison group; however, at post-test, the Treatment group result was higher than the Comparison group. Neither group maintained the post-intervention gains, but the fifteen-week follow-up results were still higher than the pre-intervention scores.
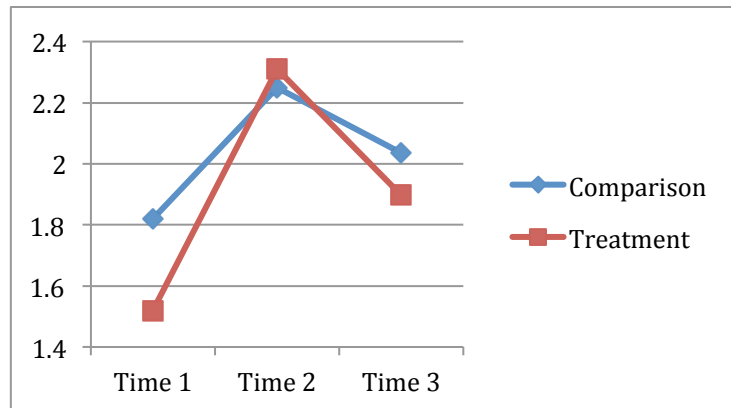
Table 9

Character and Setting: Means and Standard Deviations across Three Time Periods

Time period	Treatment		Comparison	
	M	SD	M	SD
Pre-intervention	1.52	.688	1.82	.54
Post-intervention	2.31	.712	2.25	.518
15 week follow-up	1.9	.817	2.03	.637

Figure 3

Mean scores for Character and Setting across Three Time Periods

To assess the impact of the two treatments (i.e., Treatment, Comparison) on participants' scores on the NAPLAN criteria for character and setting across the three time periods (i.e., pre-intervention, post-intervention and fifteen week follow-up) a mixed between-within subjects analysis of variance was conducted. There was no significant interaction between program type and time, Wilks' Lambda = .943, $F(2, 54) = 1.63$, p = .21, partial eta squared = .057. There was a statistically significant main effect for time, Wilks' Lambda = .594, $F(2, 54) = 18.46$, p < .0005, partial eta squared = .406. The effect size is large, with both groups showing an increase across the first time period and decrease across the second time period. The main effect comparing the two types of intervention was not significant, $F(1,55) = .97$, p = .329, partial eta squared = .017, suggesting no difference in the effectiveness of the two teaching treatments.

4.1.4 Writing Criteria: Vocabulary

Vocabulary development was one of the writing criteria addressed in the SRSD intervention, but was the area with the least positive effect for the Treatment group. Means scores and standard deviations (Table 10) indicate that of the four criteria it is vocabulary where the Comparison group has demonstrated the greatest improvement and the Treatment group the least improvement across all time periods.
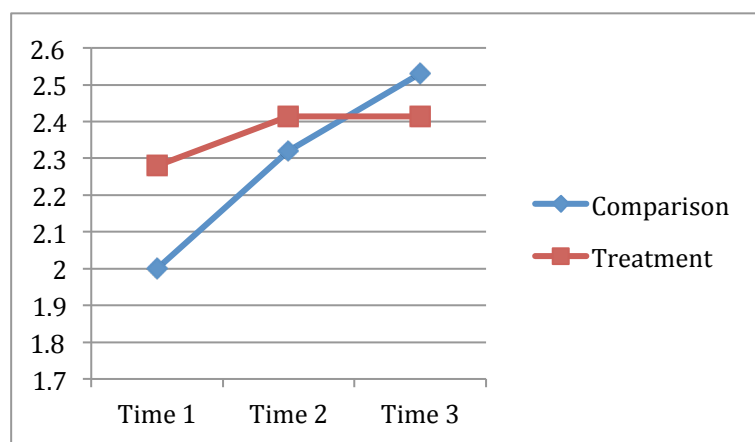
Table 10

Vocabulary: Means and Standard Deviations across Three Time Periods

	Treatment		Comparison	
Time period	M	SD	M	SD
Pre-intervention	2.28	.591	2.0	.471
Post-intervention	2.42	.568	2.32	.475
15 week follow-up	2.42	.627	2.53	.792

Figure 4

Means scores for Vocabulary across Three Time Periods

Analyses on a mixed between-within subject ANOVA indicate that there was no significant interaction effect of group and time, Wilks' Lambda = .916, F(2, 54) = 2.46, p = .095, partial eta squared = .084 or between subjects F(1, 55) = .505, p = .21, partial eta squared = .009. However, there was a significant change in main effect for time Wilks' Lambda = .751, F(2, 54) = 8.95, p < .0005, partial eta squared = .249. Results were consistent with previous analyses, showing that changes over time were statistically significant but there was no significant difference in teaching treatments.

4.1.5 Summary of writing improvement

In summary, the data analyses for writing improvement indicated that time effect was statistically significant but there was no significant interaction effect. However, descriptive statistics indicate that the Treatment group made greater gains during the intervention phase, although these gains were not maintained after the intervention.

To investigate further the significant main effect for time for each group, a paired-sample t-test was conducted to evaluate the impact of the intervention between time

periods. Given that the data was normally distributed and size of groups were similar, a paired-sample t-test allowed for differences in mean scores between each of the time periods (i.e. T1-T2, T2-T3, and T1-T3) to be examined (Field, 2009; Pallant, 2010). For both groups, for the four criteria, there was no statistically significant change over the T2-T3 time period (p > 0.015). However, the ES for these time periods for text structure, ideas and character and setting were quite large (refer Table 11).

Table 11

Paired Sample t-test values for Main Effect Time

Criteria	Group	Time Period	t value	p value	ES
Text Structure	Treatment	T1-T2	-3.36	.002	.29
		T1-T3	-3.63	.001	.33
	Comparison	T1-T2	-1.07	.293	not sig
		T1-T3	-4.71	>.000	.44
Ideas	Treatment	T1-T2	-2.281	.03	.16
		T1-T3	-2.57	.016	.20
	Comparison	T1-T2	-2.26	.032	.16
		T1-T3	-4.06	>.000	.37
Character And setting	Treatment	T1-T2	-4.74	>.000	.44
		T1-T3	-2.64	-014	.27
	Comparison	T1-T2	-3.96	>.000	.35
		T1-T3	-1.53	.136	not sig
Vocabulary	Treatment	T1-T2	-4.74	>.000	.44
		T1-T3	-2.64	-014	.27
	Comparison	T1-T2	-3.96	>.000	.35
		T1-T3	-1.53	1.36	not sig

4.2 Writing Self-Efficacy

One of the aims of this study was to assess changes in students' confidence, or self-efficacy, as a result of the intervention program. These changes were investigated through examining changes in students' beliefs and attitudes to writing and themselves as writers. The *Student Self-Efficacy Survey* (refer to Appendix D) was administered to both groups at pre-intervention and at fifteen weeks follow-up. Data from this survey were coded and recorded in Excel for SPSS analysis. Descriptive analyses of means and standard deviations were used to consider trends over the time period (refer Table 12). To assess the significance of these changes, an analysis was undertaken using a mixed within-between subjects ANOVA. From Figure 5, trends for means scores indicate that the Comparison group had higher self-efficacy beliefs at the start of the study but over time

there was a significant decrease in this group's self-efficacy. The Treatment group shows a non-significant increase in self-efficacy over the same time period.
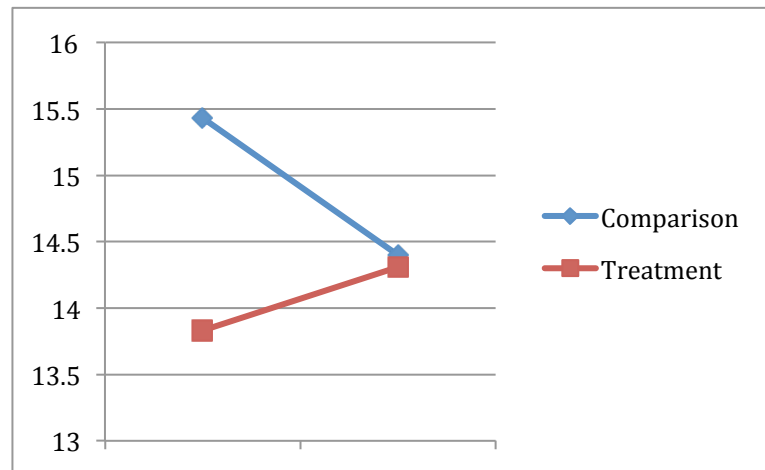
Table 12

Self-efficacy: Mean scores and Standard Deviations at pre-Intervention and 15 week follow-up

	Treatment		Comparison	
Time	M	SD	M	SD
Pre-intervention	13.82	3.57	15.33	2.69
15 week follow up	14.31	3.32	14.40	2.35

Figure 5

Self-efficacy: changes in mean scores at pre-intervention and 15 week follow-up

Results from the mixed within-between subjects ANOVA analysis showed a statistically significant interaction between program type and time, Wilks' Lambda = .931, $F(1, 57) = 4.235$ p = .044, partial eta squared = .069, indicating a moderate effect size for changes in self-efficacy over the study time period. For students in the Comparison group it seems that self-efficacy decreased significantly over the time period while the Treatment group showed a non-significant increase.

4.3 Skills and Strategies of Writing and Self-regulation

Changes in student understandings of the writing and self-regulatory skills and strategies required for successful writing were also considered in this study. The qualitative data from students' responses to the open-ended questions on the *Student Self-*

Efficacy Survey and the student interviews were used to evaluate students' understandings of these essential components of the writing process.

The *Student Self-Efficacy Survey* was administered to both groups, at two time points (pre-intervention and fifteen weeks after intervention). The open-ended questions asked students to write down any special strategies they used to help them when writing. These strategies could be writing strategies, such as using a story plan when writing a narrative (OCR) or self-regulated behaviours such as planning ideas and setting goals. Student responses were examined to establish differences across time and between the groups by analysing the number and the type of strategies reported by students in both Treatment and Comparison group. These data are presented in Tables 13 and 14.

Table 13

Number of reported skills and strategies at pre-intervention and 15 week follow-up

	n	Response None	Response One	Response Two	Response Three or more
Treatment					
Pre-intervention	29	18	9	2	0
15 week follow-up	29	3	2	10	14
Comparison					
Pre-intervention	30	16	11	2	1
15 week follow-up	30	17	12	1	0

Table 14

Type of reported strategies at pre-intervention and 15 week follow-up

	n	Response None	Response Writing	Response Self-regulation	Response Both
Treatment					
Pre-intervention	29	18	5	6	0
15 week follow-up	29	3	8	4	14
Comparison					
Pre-intervention	30	16	5	7	2
15 week follow-up	30	17	6	7	0

Results indicate that for the Treatment group there was a substantial increase in the number and types of writing and self-regulatory strategies that students reported would assist them in their writing. For the Comparison group, at both time points, half the students responded that they did not know any strategies for assisting their writing. At pre-test 60% of the Treatment group could not provide a writing or SRL strategy. However, at the 15 week follow-up time point, only three students could not provide a strategy and 50% of the group reported a range of writing and SRL strategies. Treatment group

students could articulate a variety of both writing strategies and the self-regulatory behaviours that had been explicitly taught during the implementation of SRSD. The Comparison group responses over the same time period demonstrated little growth in the number or the type of reported writing or self-regulatory behaviours. The differences in responses are exemplified by examples of student responses (refer to Tables 15 and 16). For the Treatment group, from pre-intervention to follow-up, responses demonstrated a developing knowledge of appropriate strategies and a growing use of metalanguage to explain the processes students employed to guide their writing, whilst the Comparison group responses showed limited ideas or little change in ideas or strategies (for further examples of student responses refer to Appendix L).

Table 15

Treatment Group: Sample Responses to *Student Self-efficacy Survey* question

I watch movies or read books then I change it and add my own ideas	My trick is I imagine I'm in the story. When I write I think of the OCR strategy and about who I'm writing for. I try to remember my punctuation and the exciting noun groups (vocabulary) (T)
No	I learned to use punchuation and edit your work. I learned about what do I do before I write and while I write and after I write. I learned bout the three w's and the to How's and the big O,C,R,C. They are the things you need to remember when your writing a narrive (L)

Table 16

Comparison Group: Sample Responses to *Student Self-efficacy Survey* question

Brain sorm, writing in point form and asking myself what is this story going to be about.	Using bullite point and not writing in full sentences. So when I start writing I just add words. (T)
with my writing befor I started I have to think befor I started my story. I have cheak my spelling, capital letters and punctuation.	Use planning page before writing to help me with my story (Z)

4.4 Self-regulated Behaviours

The Harris and Graham (1996) *Word Processes Checklist* was used to evaluate a range of self-regulated behaviours. This checklist has seven categories of self-regulated behaviours (refer to Chapter 3). Mean scores for each category, pre-intervention and at the

fifteen week follow-up, are presented in Figure 6 and 7. Results from the checklist data were inconclusive. The graphs indicate that for both groups there were little change within groups over time (pre-intervention to 15 week follow-up) or between groups' reported use of these self-regulated behaviours.

Figure 6
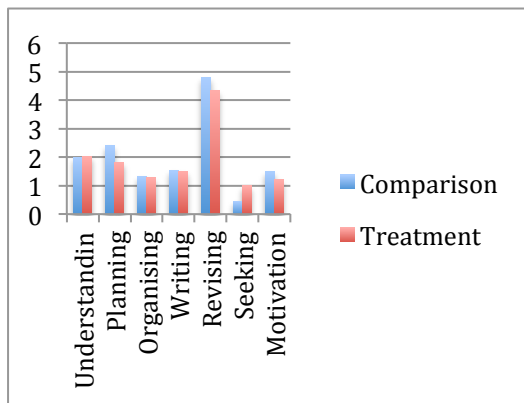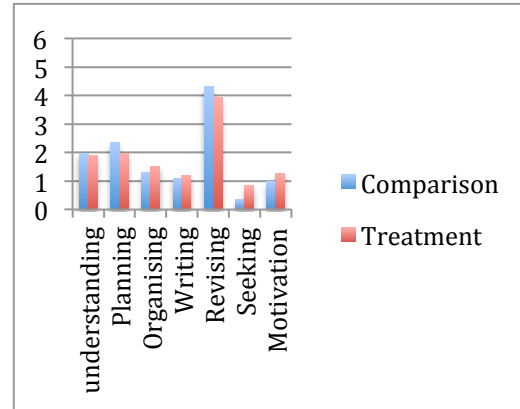Mean scores for self-regulated
behaviours pre-intervention

Figure 7
Mean scores for self-regulated behaviours
at 15 week follow-up

Changes in student awareness and understanding of SRL strategies were more evident in responses from the student small group interviews. In the fifteen week follow-up interview the Treatment group students were able to articulate ideas demonstrating the development of writing and SRL behaviours. This development is illustrated in comments relating to planning and organising their writing (Table 17). Pre-intervention comments indicated understandings guided by teacher instructions and procedural routines, but with little reflection as to their role in the writing process. Follow-up interview discussion focused on the knowledge and understandings the students needed to bring to writing tasks. The Comparison group started with SRL ideas on how to plan and organise their writing; however, over the study there was no development of these ideas.

There was little change in the responses from the Comparison group to questions about what strategies they have learnt to help them write and what areas of their writing they could improve. Responses at both pre- and follow-up interviews focused on the mechanical aspects of writing, such as spelling, punctuation, paragraphs, a good title and, at the follow-up interview, students were unable to give any strategy ideas. In contrast, the Treatment group students articulated a growing awareness of the need to monitor their writing. At pre-intervention, comments were teacher focused (e.g., 'ideas from the

Table 17

Student Interviews: Sample Responses

Pre-intervention	15 week follow-up
Treatment Group 'When the teacher is talking I think about it', 'I look at the picture.' 'Get my red and blue pen out, draw a margin and start writing.'	Treatment Group 'You have to make a description of the characters. I plan my characters, their names, where they are.' 'Think of the setting and what the theme of my story will be and use what comes to my mind.'
Comparison Group 'Make lists of words, not full sentences', 'dot points then write what is going to happen', 'write down the problem and how to solve it and add things in.'	Comparison Group 'dot points as well as short sentences', 'bullet points and sometimes imagine pictures in my head'

teacher'; 'I like it when she (teacher) helps me') or concerned the mechanics of writing (e.g., neater hand writing, improve my spelling), while the follow-up interview discussion was more focused on their role in the writing process, (e.g., 'increase my vocabulary; it comes to my head but can't put it on paper. It is hard.'; 'paragraphs make stories more interesting and longer, so people don't get bored.').

4.5 Conclusion

The four constructs being assessed in this study have yielded varying degrees of support as to the effectiveness of the SRSD approach within an Australian mainstream class. The descriptive and ANOVA analysis of the *Student Self-efficacy Survey* data indicates that SRSD fosters a positive change in student attitude and increased confidence in writing and writing skills. While encouraging changes in students' knowledge of strategies and writing skills were evident in the Treatment group's qualitative responses on the *Student Self-efficacy Survey* similar corroboration of increased understanding and use of self-regulated behaviours was not indicated in the data from the *Word Process Checklist*. However, student responses in the small group interviews showed a development of self-regulated ideas by students in the Treatment group. Results of the analysis of all Treatment group quantitative NAPLAN criteria data indicate consistent positive trends across the four writing improvement areas. All these trends and implications will be explored fully in the following chapter, and their significance as to future research and classroom implementation will be discussed.

Chapter 5
DISCUSSION

There is a growing body of research evaluating the effectiveness of the SRSD model of instruction. SRSD "appears to be a particularly potent approach for teaching writing strategies (mean weighted effect size = 1.14; Grades 4-8)" (Graham & Perin, 2007a, p. 466). However, as noted by Harris et al. (2012), the majority of SRSD research has been implemented with students at-risk in small groups or one-on-one, and that despite the evidence of the importance of writing in school and beyond, there is little research on writing intervention at a whole class level. Hence, this study set out to address the call for further investigations into whether SRSD can produce similar results in a regular class setting (Baker et al., 2003, Ortiz Lienemann et al., 2006). The literature search for this study also noted that most research has been within an American educational setting. This study aimed to extend this research by evaluating the impact of the SRSD approach within a regular class in an Australian educational setting.

The research question guiding this study was: to what extent does using the SRSD model to teach a mainstream Year 5 class the knowledge and strategies essential for composing narratives enhance students' writing? Four aspects addressed in the study were a) improvements in student writing, b) development of their understandings of the writing process, c) changes in student self-efficacy, d) development of self-regulatory behaviours.

5.1 Writing Ability

Evidence for improvements in student writing was demonstrated in changes in student writing samples, which were marked according to the Australian National Assessment Program protocols for NAPLAN writing criteria. Four of the ten NAPLAN writing criteria were addressed at three points during the study. Analysis of data indicated that although there was no difference between groups over time, there was a significant effect for time. Both groups demonstrated statistically significant improvements over the intervention period for all four criteria, with the Treatment group showing the greater mean improvement on three of the criteria. Follow-up maintenance results showed continued improvements for the Comparison group on three of the four criteria, while the Treatment group showed no improvement or decline in scores. Overall however, the Treatment group showed improvements over the six-month study period, especially during the implementation of the SRSD writing program.

Understanding of writing knowledge and strategies were evaluated by the qualitative data supplied in student interviews and open-ended questions. There was a very clear difference between the two groups' discussion. As expressed by student comments, the Treatment group demonstrated considerable development in their knowledge about the writing process and the writing strategies needed for successful writing. It appeared that SRSD's explicit and systematic approach fostered the students' ability to discuss and appreciate the skills and strategies associated with improved writing. To an extent, this could be seen in the more substantial improvements in their post-intervention writing samples relative to the Comparison group. These gains, however, were not maintained beyond the seven-week program.

Maintenance of taught skills and understandings has to be a goal in all teaching. SRSD studies report significant gains in students' writing from pre-intervention to post; however, the story for continued improvement post intervention is not as impressive. Troia (2002) stated that changes in writing behaviours and performance were often maintained up to 4 weeks following treatment, but not beyond that point. This study's literature search found most studies that discussed maintenance testing results carried out testing two to four week post intervention. Two studies used a longer time frame: Graham et al. (2005) (ten weeks) and Torrance et al. (2007) (twelve weeks). The majority of these studies report that follow-up test results sustained the improvements made at post-testing but did not show any of the improvement demonstrated pre to post-testing (Chalk et al., 2005; Graham et al, 2005; Lane et al., 2008, 2009; Ortiz et al, 2006; Tracey et al., 2009; Zumbrunn & Brunning, 2013). Results were similar to this study: namely, significant improvement pre to post-intervention, with no significant changes post follow-up. However, as with other studies, the fifteen week follow-up levels were greater than pre-intervention levels. A recommendation that booster lessons were needed to support maintenance was noted in study discussions (Harris et al., 2003; Mason et al., 2011a; Zito et al., 2007).

5.2 Writing Self-Efficacy and Self-Regulation

Many of the SRSD research studies note that motivation and self-efficacy are important aspects of the SRSD model (Ortiz Lienemann et al., 2006; Zito et al., 2007); however, from a review of the literature it seems that self-efficacy has less supporting evidence than SRSD's other focus areas, such as writing knowledge and strategies (Graham et al., 2013b). There appear to be limited numbers of SRSD studies explicitly addressing evidence for the development of self-efficacy. Some studies use anecdotal

comments and observation as evidence of developing self-efficacy beliefs (Helsel & Greenberg 2007). Two studies using instruments to measure changes in student self-efficacy were Graham et al. (2005) who found SRSD did not enhance self-efficacy, while Mason et al. (2012), reported "mixed results" (p. 92) with Mason et al.'s clearest evidence coming from post-intervention student interviews.

This study's data from the *Student Self-efficacy Survey* indicated changes in both groups over the study period. Results revealed a significant effect for group and time, with the Comparison group showing a significant decrease in confidence and Treatment group an increase in self-efficacy. A reason for this difference could be the Treatment group's developing knowledge about writing processes and strategies and how these help them to be better writers. In contrast, the Comparison group was unable to articulate any strategy ideas in the follow-up interview, indicating that possibly self-efficacy may not have been an explicit part of the writing program for these students.

Rather than evaluating the students' perceptions of self-regulation, in many studies the efficacy of self-regulation was judged on the implied effect it had on writing outcomes when added to strategy instruction (Graham et al., 2012). For this study, the *Word Process Checklist* provided no overt evidence of the use or the development of SRL behaviours for either group; however, student comments in the small group interviews supported evidence that the Treatment group's awareness of self-regulated behaviour had made qualitative changes over the study period. From initially relying on teacher directed procedural actions, their comments showed evidence of a growing awareness of their role in becoming better writers. The Comparison group indicated an awareness of some self-regulated practices but these were limited and showed no change over the six-month study period.

5.3 Whole Class Implementation

A key aim of this study was to investigate the implementation of SRSD in a mainstream classroom. The study participants were from disadvantaged social backgrounds, and there was evidence that students generally were at-risk in terms of literacy development. The five previous studies (Anderson, 1997; De la Paz & Graham, 2002; Harris et al., 2012; Tracy et al., 2009; Torrance et al., 2007), implemented in a regular class setting, provide direction for discussion of the results from this study. All of the five studies used student writing samples employing a number of different measures, such as word count (De la Paz & Graham, 2002; Harris et al., 2012; Tracy et al., 2009) and story grammar elements (Anderson, 1997; Harris et al., 2012; Tracy et al., 2009). A holistic scale of story quality (see Saddler & Asaro-Saddler, 2013, for an example of a

holistic scale) was one of the most commonly used measures (De la Paz & Graham, 2002; Harris et al., 2012; Tracy et al., 2009; Torrance et al., 2007). Only one study examined self-efficacy (Anderson, 1997); two studies had a procedure to assess students' use of writing strategies (Anderson, 1997; Torrance et al., 2007), while no study appeared to make any explicit attempt to assess changes in students' awareness or use of self-regulated behaviours.

This study attempted to be more explicit in evaluating the four measures used to determine the effectiveness of the SRSD model. The four NAPLAN writing criteria evaluated were directly linked to the writing knowledge and strategies taught during the intervention; both surveys (*Student Self-efficacy Survey, Word Process Checklist*) came from a research base on self-regulation and on self-efficacy (Harris & Graham, 1996), while the small group student interviews provided participants a forum to voice their experiences and understandings regarding the four writing variables.

When considering study results however, both the NAPLAN scoring and the *Word Process Checklist* warrant discussion. The NAPLAN measurement task for writing improvement could have had an effect on student results. In a review of reciprocal teaching studies, Rosenshine and Meister (1994) found that where studies used experimenter-developed tests, the test results were usually significant, yet when standardised tests were used, the results were usually non-significant. Sporer, Brunstein and Kieschke (2009) replicated this finding. They found that experimenter-developed (near-transfer) tasks resulted in higher comprehension scores than standardised (far-transfer) tasks. Although NAPLAN rates well as a test (O'Neill, 2012), as a standardised, far-transfer test it perhaps underestimates the change in achievement levels over shorter periods of time.

The items on the *Word Process Checklist* did not appear to lead students to make links between the checklist items and the self-regulatory strategies they knew and could articulate during the small group interviews. Rather than the four SRL behaviours (i.e., self-instruction, goal setting, self-monitoring and self reinforcement) emphasised in the work on SRSD and writing (Harris et al., 2008a), a more explicit breakdown of self-regulated behaviours is provided in the study by Zimmerman and Pons (1986). Their investigation with high school students was "undertaken to develop and validate a structured interview for assessing students' use of self-regulated learning strategies in naturalistic settings" (p. 615). They found ten categories of self–regulated learning behaviours: self-evaluation, organising and transforming, goal setting and planning, seeking information, keeping records and monitoring, environmental structuring, self-

consequences, rehearsing and memorising, seeking social assistance, reviewing records (p. 618). These ten perhaps provide a clearer, more explicit breakdown of the self-regulated behaviours that students need to learn to use and remember. The categories provide teachers with the concepts underpinning self-regulation, the language needed to discuss these SRL concepts and also an assessment framework.

There are other factors that need to be kept in mind when considering results from a whole class implementation of SRSD. As pointed out by Tracey et al. (2009) the majority of SRSD studies have been with a single student or small group, which would provide greater opportunity for students to receive more individualised attention. Also, perhaps struggling writers had more room for improvement than those in a regular class setting (De la Paz & Graham, 2002). This is supported by the Graham and Perin (2007a) meta-analysis that found in writing studies with students in Grade 4 and above, greater gains were made by struggling writers (ES = 1.02) than by students in regular classes (ES = .70).

Another area that was significant in the five studies was teacher professional development (PD) and support. In four of the studies (De la Paz & Graham, 2002; Harris et al., 2012; Tracy et al., 2009; Torrance et al., 2007) professional development was a large component of their intervention action. Workshops were held before the studies, where teachers were in-serviced on implementation of the SRSD model and supplied with scripted lessons, teaching manuals and student material. A high level of support was maintained during the intervention periods that ranged from six to ten weeks. For three studies (De la Paz & Graham, 2002; Harris et al., 2012; Tracy et al., 2009), treatment fidelity measures were an important consideration and were addressed through regular school visits, classroom observations and checklist by trained post graduate students and analysis of audio tapes of lessons. This study did not have the budget, the resources or the personnel to carry out professional development or fidelity checks at such a level. Anderson's (1997) level of teacher–researcher professional dialogue was more realistic of a school scenario. She met weekly with the two teachers to discuss lesson implementation and goals. However, time demands on the Treatment class teacher in this study allowed minimal professional exchange.

Harris and Graham (1997) stated that there is a number of characteristics essential to the successful implementation of SRSD. Three of these pertain to this study. Harris and Graham stress the need for both individualisation of instruction and that "instruction is criterion based, rather than time based" (p. 140) with each student being given the time needed to achieve their cognitive and writing goals. The time-based criteria have been noted as a limitation (Harris et al., 2012) in research studies with fixed time frames. The

Harris et al. (2012) study had the longest intervention period (24 lessons); however, they state that this limitation on number of lessons is counter to the SRSD premise of allowing every student the time he/she needs to reach the criterion. Individualisation also presents more of a challenge in a regular class than in a small group or one-on-one withdrawal setting. Within a mainstream class the teacher has to juggle the needs of an often very diverse group of students. However, a benefit of the SRSD model shown by research (De La Paz & Graham, 2002; Graham & Perin, 2007a; Graham et al., 2012) is that typically, developing writers, as well as those who struggle, respond positively to this instructional approach making it suitable for inclusive classrooms.

A third aspect emphasised by Harris and Graham, (1997) is the teacher's contribution to the success of SRSD instruction. Teachers need to be aware of the importance of cognitive strategies, and structure their teaching to foster students' meta-cognitive understandings of SRL and writing strategies (Garcia-Sanchez & Fidalgo-Redondo, 2006; Zimmerman, 2008). Teachers need to be able to determine what writing and SRL knowledge and strategies are important (Schraw, 1998) and effectively teach strategies so students can successfully use and benefit from them (Hagaman et al., 2012).

A positive aspect of implementation of the SRSD approach in a mainstream classroom setting is that the model fits with the Australian National Professional Standards for Teachers framework, which guides current teacher practice in Australian schools and maps well onto pedagogical practices endorsed by NSW DEC. Both the SRSD model (Harris & Graham, 1996) and the DEC stance is that instruction must be provided within an integrated literacy curriculum and it must be explicit and systematic. DEC teaching practice in all curriculum areas is based on modelled, guided and independent learning with developing background knowledge (building field knowledge) well recognised as an essential and effective practice to support student learning. These represent four of the six stages of SRSD. Classroom teachers, having an understanding of the role and explicit nature of the other two stages, Discuss it and Memorise it, would contribute greatly to consolidating effective teaching practice and could actually fill in teaching areas either overlooked, undervalued or poorly used by teachers.

5.4 Limitations

A limitation of this study is the small sample size. A larger scale study with larger sample size, including more grade levels and different schools could have provided results and recommendations that could be generalised to other populations.

Time limitation is contrary to the ethos of the SRSD model. The Harris et al. (2012) study stated 24 lessons did not provide an adequate time frame for all students. This study, with just 14 lessons, posed an even greater time challenge for student learning. Another caution expressed by Harris and Graham 1997 is to start slowly but perhaps this study attempted to look at too many factors pertaining to SRSD intervention. A focus on fewer aspects may have provided clearer evidence as to the efficacy of SRSD within a whole class context.

The Treatment and Comparison schools' arrangement of stage classes was another confounding factor deserving attention. It raises the question of whether implementation of SRSD with an intact class group would have yielded different results. An intact class group was the preferred class grouping for this study; however, both schools had stage grouped classes. For the Treatment group the intervention class was drawn from three Year 5/6 classes. After the seven-week intervention program twenty of the students were back in their usual class with teachers who had no knowledge of the intervention program, while over the six month study period, the Comparison group students had the consistency of the same teacher from pre-test to follow-up maintenance testing. The Treatment group teacher, who had been involved with the planning and was present during the implementation, saw the changes in teaching as only relevant to those students in the study. She felt that as most of her class had not been involved in the study she could not apply ideas and practices with her class during or post-intervention. Also, due to time constraints in a busy school, there was no time given to professional training with the class teacher, and perhaps observation and working alongside are not as powerful as focused coaching and ongoing professional development. Possibly implementing SRSD with an intact class and providing professional training for the teacher could have resulted in a sense of ownership by the teacher and integration of the SRSD framework into both the teacher's practice and across the curricula.

5.5 Further research

An aspect that was not addressed in this study was peer assistance. Both meta-analyses (Graham & Perin, 2007a; Graham et al, 2012b) found significant effects for peer assistance studies (ES of .75 and .89 respectively). Students responded positively to the addition of peer support to SRSD instruction (Graham et al., 2005), as they thought it was helpful with story ideas, details and the mechanical aspects of writing (Anderson, 1997) and it appeared to enhance their writing (Ortiz Lienemann et al. 2006).

Another area requiring attention is that of maintenance and generalisation of learning. The development of knowledge and understandings must be the goal of any pedagogical practice. An essential corollary to this development must be the ability to remember (i.e., maintenance) and use this knowledge in other settings, at other times and for other purposes (i.e., generalisation). For many students the processes of retaining and generalising what they learn does not occur easily or naturally. Although it is stated that procedures for promoting maintenance and generalisation are integrated throughout the stages of the SRSD instruction model (Harris et al., 2003), research studies do not provide strong evidence of either this occurring or of its effectiveness. Maintenance and generalisation results were not discussed as part of the meta-analyses (Graham & Perin, 2007a; Graham et al., 2012). While the Graham and Harris (2003) meta-analysis did address efficacy relating to maintenance and generalisation, interestingly, it did not in their 2013 update, which just noted they were "generally maintained over time" (p.428).

As an instructional approach SRSD achieves impressive growth in student performance. A pressing area of future research is to see how these changes can be maintained and generalised. Perhaps one direction that could be considered is the type of research approach that would best fit investigating SRSD. SRSD is essentially an approach relying on changes in teacher practices and as such, whether it be small group, individual or whole class, it seems that short intense research interventions establish change, but do not guarantee long-term continuing improvement. Perhaps a different research approach, such as action research, may be more conducive to investigate such changes. Action research may lend itself better to the SRSD model as it addresses some of the vital characteristics of the model (Graham et al., 2013b), and its teacher centred practice reflects the aims of the SRSD model. As Harris et al. (2003) state "the impact of instruction on students is much greater, and maintenance and generalisation of strategic performance across the curriculum and grades are more likely, when strategies instruction is embraced across a school or district." (p. 15).

5.6 Conclusion

Positive trends in this study's results indicate that the SRSD instructional approach certainly warrants further investigation. Additional research in an Australian educational setting is needed to explore many other aspects of using the SRSD model to teach writing. Areas warranting research, such as the use of peer support (Graham & Perin, 2007a; Graham et al., 2012), and teacher professional training (Graham et al., 2013b; Harris et al., 2012) have been highlighted by other studies.

In summary, this study indicates there are areas of students' writing abilities and self-efficacy that can be improved by the explicit teaching of the strategies and knowledge required in the writing process, and SRSD provides a teaching framework to achieve these goals. However, within Australia, this study constitutes a very small beginning of an area of research that requires considerably more attention than it currently receives.

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Appendix A Author comments

Pip Harry is a freelance journalist who has worked on magazines for many years, including chasing celebrities as Entertainment Editor for NW and Deputy Editor for TV Week before turning herself into a yoga-loving frequent flyer as Health & Travel Editor for Woman's Day. She lectures at universities and schools on writing and journalism. Pip has had short stories published in the UTS Writer's Anthology and Wet Ink and in 2012 released her first YA fiction novel, I'll Tell You Mine (UQP) She's currently working on her second book, Head of the River, helped by a 2012 Emerging Writer's Grant from the Australia Council. Pip lives in Sydney with her partner and their gorgeous daughter, Sophie. When not at a keyboard, she can be found searching for the perfect flat white and competing in ocean swimming.
Pip Harry: website: www.pipharry.com/

Writing a book:

It's very daunting to think about writing an entire book, so I break up the process into more manangeable bites. I'll play with an idea for a few months, making a few notes of central characters, plot points, themes. If the idea feels strong and I'm compelled to begin it, then I'll start with a few chapters to see if the voice of the character/characters is there. Once the project has gone past 10,000 or so words and looks like it might become a novel I'll start to think about how it might be completed and if I have to do any special research.

For my first book, I'll Tell You Mine, I chipped away slowly at the idea, taking smaller pieces of it (1000-2000 words) to my writer's group to see if the material was working or if they had any ideas for how it might flow better. A formal writing group is a great way to gauge reaction and to pick up some pointers from others as you write a longer piece.

For my second novel, Head of the River, I haven't used a writing group but I've been more structured in my approach. I wrote the first draft in 2 years, and now I'm spending around 6 months polishing up that draft. I'm on an Emerging Writers grant from the Australia Council, which has helped me focus on the time frame. Using the grant I've set myself a one year goal (Nov 2012 to Nov 2013) to really make the draft of the book shine, and to travel and research certain aspect of the book.

I don't write strict chapter outlines, I'm known as a 'pantser' in writing circles (ie I fly by the seat of my pants) but usually I will write myself a few sketchy planning notes at the end of a writing session (onto the screen) so that when I come back to the blinking cursor, I have a few directions for where it's going!

I plan to use Beta Readers or Critique Partners (CP's) to help me edit this time instead of a writer's group. CP's are usually other writers/authors whose opinion you trust, who will look at an early draft and make suggestion for making it stronger/plot holes ect. I will likely send it off in the next 4 weeks or so to 3-4 of these readers. Then I'll take their feedback and apply it to the manuscript. Once I'm happy, it goes off to my agent, and if she's happy, it makes it way to my publisher - UQP - to hopefully begin it's journey to publication.

In my home office I have two whiteboards. One that I write down my current commisssioned journalism stories on - including word counts and deadlines. I erase each story as I send it off and it's approved.

Appendix A continued: Author comments

The other is more of a creative/ideas board. It's where I scribble thoughts for shorter books (picture books, middle grade) It's usually chockers with ideas, but not all of them will be in progress. I'll pick the best ones and write them up. I tend to write plenty of fun picture books on the side to balance out the heavier YA material.

For my current novel, Head of the River, I also have a big folder of clippings, DVDs, books, scribbled notes, character lists, maps, photos and other material. It has grown from a few pages to a bulging document. I also like to have a few favourite books in the YA genre on my desk as I write, just to remind me that's the quality what I'm aiming for.

In terms of my writing schedule, I'm used to being fairly displined as I've been a freelance writer working from home for seven years. I currently work three days a week 9am-4.30pm and try to set myself mini goals during the day.

I might, say, concentrate on editing 20 pages or writing 2,000 words or finishing a first draft of a magazine feature. I try to steer clear of social media during this time as it's very distracting!
If I'm out and about I tend to write down ideas for books, picture books, short stories, magazine pitches, and current WIPS on my smart phone's notepad setting and transfer them to either my home computer or my ideas whiteboard. I also take plenty of photos on my phone and flip through them as I write later.

The other thing I'll do to keep myself interested and fresh while writing is to mix up the location I write in.

So for Head of the River I've written in libraries, cafes, pubs. Just so I don't feel like I'm dragging myself to the same desk every day! It's worked really well and been a fun way to break out of the routine.

Appendix A continued: Author comments

Trent Jamison is a science fiction and fantasy writer who has published five novels, and around seventy short stories. I've worked to both self-imposed and professional deadlines, and some of the later have been quite demanding, particularly when the books have been part of a series. Discipline combined with reflection is an absolute imperative. Trent Jamison: His website: www.trentjamieson.com/

Writing is always difficult, obviously some days are better than others, but there is still the endless requirement that words need to be put down, and in the right order, and often with no real sense of inspiration in their initial placement.

For me I require several strategies, and these will change dependent on the stage at which a project is at. Initially it is in finding traction in a story. The only way to do this effectively is to make sure that you make a daily time and place and give yourself to the story a bit. It's like leaving food out for a cautious animal. You need to focus and wait, and not panic.

I've found that I need to switch off all internet access, and stick to internet silence for at least two or three hours. When I do this I find my productivity increase exponentially. When I don't, I waste a lot of time trying to be witty on Facebook - which achieves nothing. Also closing out the world is extremely important in keeping your mind on the work.

On the other hand, sometimes you need to embrace the chaos. The most important thing for me is keeping the project moving. I'll write on the bus, or at a food court, a library or even a cafe. The white noise of a food court is quite conducive to dulling background thoughts, and getting you utterly focused on the work at hand. Bits of my novels have been written in all these places.

Just getting into the habit of writing every day - if possible - will see the work done.

I also make sure I have a notebook handy whenever I leave the house. It helps to have something that you can pick up and immediately scratch out ideas onto. The notebook acts as a linkage point for all the projects I'm working on. I've still to find an app that is just as effective, and doesn't need charging!

I also get a bit word count obsessed once a project is building up steam - usually a bit before a third of the way through the book (which is quite often where the challenge sets in). Then I like to keep a notebook where I write the number of words written that day, and the total number of words. It's just a good way of charting a book's progress.

Specific deadlines are good too, personal and contractual ones - though the contractual deadlines are always more effective.

Also, trying to keep clear in your mind why you are writing a book, or project, what it is that you want to achieve and how you are going to do it? Keeping aesthetic goals in mind is one way of staying afloat through the storms and distractions that life hurls up around the writing of a book (or any other job). It's all too easy to lose sight of these things when you are writing, particularly working on a project that may take many years to complete.

Slow and steady, reminding yourself that there are stages where you will get lost, usually around 2/3 of the way in, and that doubt is natural, and probably even a requirement of the

process, is important. Novels are dreams, and patience, and long hard work. Unless your natural inclination is to write and in the long form and to see a project through, I don't know how you would finish anything.

Appendix A continued: Author comments

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Trials and tribulations of writing and strategies to help with focus.

I am someone who most definitely struggles with procrastination. This is not a battle I can claim to have won yet! But I have, over time, developed strategies that help me start writing, and maintain the necessary focus to keep going.

I am not (yet!) someone who sits down to write every day. I have young children, and have to work around them. The unfortunate side effect of this sort of writing pattern is that it can be quite hard to get back into writing after a break. Usually I'll have a period – sometimes weeks – where I'm thinking about writing, and wanting to write, and being frustrated because I'm not writing, and this finally culminates in me building up enough momentum that I'm driven to sit down at the computer. Once I'm actually writing, I wonder why the 'getting started' part seemed so insurmountable, but for me it usually works that way.

During the period I've mentioned above, where I'm planning to start writing but haven't quite started yet, there are some things I have learned to do as a standard part of life. Like many writers, I always carry a notebook to jot down ideas. I spend a lot of time thinking about writing, mulling over character motivations and plot tangles, and letting dialogue unfold in my head. All that thinking in advance does mean things spill out more readily when I'm writing.

Then while I'm writing…there are a few tricks I use to keep up the flow and avoid getting blocked. I tend to write in scenes, and while I often don't plan out the whole novel in advance, I do try and have notes on a few scenes yet to come, so when I finish one, I'm already planning the next one. I do usually re-read the previous day's work when I sit down each day too. I find this helpful for getting me in the right frame of mind, though I know some writers avoid doing this when they're drafting. At the end of a writing session I always check my word count, so I know how much I've written that day. And finally, music can be good! I'll often put on my headphones when I'm writing, and have a favourite song – or one with the right mood for what I'm writing – on endless loop. Background noise to block out the outside world.

Appendix B Literature search: SRSD studies 1997-2012

This is not an exhaustive list of studies over this period but a represent sample of the range of studies implementing SRSD as the research treatment.

Study	Participants	Implementation by	Setting
*Anderson, 1997	Year 5 47 students Mainstream with LD identified	CT & author (Special ed teacher)	In general class
*De La Paz, 2002	Year 7&8 Typically achieving students	Class teacher trained by author	Subgroup in general class
Troia & Graham, 2002	Years 4&5 20 students LD	Trained graduate students	Withdrawal, pairs
Chalk et al., 2005	HS Year 10 15 students LD	Author & class teacher	Small group
Graham et al., 2005	Year 3 73 students Struggling writers	University graduate students	pairs
Garcia 2006 Spanish	Years 5&6 121 students 3 groups LD	Trained external	SRSD vs SCM; small groups across schools
Ortiz Lienemann & Graham, 2006	Year 2 6 at risk students	Study author	Tutorial, 1-1
Reid & Lienemann, 2006	Year 3 & 4 3 students ADHD	Author/post graduate student	One-one
Saddler, 2006	Year 2 6 students LD	University post graduate student	In pairs withdrawal
Helsel & Greenberg, 2007	Year 6 1 student Struggling writer	Class teacher author	Individual withdrawal
*Torrance et al., 2007 Spain	Year 6 Spanish 72 students mainstream	Trained class teachers	In general class
Lane et al., 2008	Year 2 6 students EDBD	Graduate students	One-one withdrawal
Mourad, 2009 Egypt	HS Year 7 67 students LD	?? not clear	Invited to participate? Not clear
Sandelmel et al., 2009	Year 3 3 students Behaviour	Graduate students	One-one withdrawal
*Tracy et al., 2009	Yr 3 127 students mainstream	Class teachers	In general class
Little et al., 2010	Year 2 13 students Behaviour	Graduate students	One-one withdrawal
Mason & K 2010 (abst)	Years 7&8 5 students ED/BD	Spec ed graduate student	individual

Appendix B Literature search continued: SRSD studies 1997-2012

Midford & Harrison, 2010	Yr 6 One student with Chronic health history	Dist Ed teacher & author	Distant education
Mason et al., 2011b 2 studies	Year 7 1) 6 students. 2) 10 students LD +ADHD	researcher & Special Education teacher	Learning Centre in Eng period, small group
*Harris et al., 2012	Years 2&3 mainstream	Trained class teachers	In general class
Hoover et al., 2012	Years 11& 12 4 students LD	researcher & class teacher	Tutorial, 1-1
Zunnbrunn & Brunning 2013	Year 1 6 students Typically achieving	author	Withdrawal pairs

* studies using SRSD intervention in regular class setting

Appendix C: NAPLAN Assessment criteria for writing samples

National Assessment Program- Literacy and Numeracy 2008 *Writing: Narrative marking guide.* p 4

Assessing Writing in the National Assessment Program 2008

The writing task
The writing task for this test is a narrative. It is the same task for all students in Years 3, 5, 7 and 9. The administration of the writing tasks employs closely scripted scaffolding. The teacher reads the directions on the writing prompt aloud to all students. The prompt includes images which can support students in crafting their response.
Students have 5 minutes to plan, 30 minutes to write and 5 minutes to edit.

Definition
The following definition of the social purposes of the narrative has shaped the development of the criteria. It has also shaped the delineation of the essential structural components required for the task.

A narrative is a time-ordered text that is used to narrate events and to create, entertain and emotionally move an
audience. Other social purposes of narrative writing may be to inform, to persuade and to socialise.
The main structural components of a narrative are the orientation, the complication and the resolution.

Criteria
The ten criteria assessed in the writing task are
- Audience
- Text structure
- Ideas
- Character and setting
- Vocabulary
- Cohesion
- Paragraphing
- Sentence structure
- Punctuation
- Spelling

The following table shows criteria and the range of score points for the writing task.

Audience	Text Structure	Ideas	Character and Setting	Vocab	Cohesion	Paragraphing	Sentence Structure	Punctuation	Spelling
0–6	0–4	0–5	0–4	0–5	0–4	0–2	0–6	0–5	0–6

Using this marking guide

The top of each page shows the **criterion name and number**. The **skill focus** defines the underlying skill being assessed.

The **category descriptor** is a broad statement describing the particular skill level. This is an overall statement which should be used to make the judgement.

Additional information is included to help shape the judgement. However, this information should not be read as an exhaustive list.

Appendix C continued: NAPLAN Assessment criteria for writing samples

Sample scripts which exemplify the standard for a particular score are listed. (The number in brackets is the page reference.) The script and annotations supporting the score are organised in the middle section of the marking guide.

A **glossary** of terms used in the rubric is provided after the exemplars.

A list of **spelling words** is included at the back of the guide. This list should be used in conjunction with the spelling criterion on page 15. The list is not exhaustive.

<div style="border:1px solid black; padding:10px;">

Before beginning the Writing test, all students are given a coloured Writing test stimulus sheet and are read the following instructions:

Today you will do a Writing test.

In this test you are going to write a narrative. Narratives are also called stories.

You have to write a story about the topic. You can use the ideas from this stimulus sheet or you can use your own ideas about this. Look at the pictures and the words to help you with your ideas.

</div>

During marking in 2010, information will be collected on whether students have written on the assigned topic. This will be done by markers recording a 0 or 1 against the criterion. Comprehensive training on how to assess whether a student has written on topic or not will be provided to all markers in all Australian marking centres prior to the commencement of marking.

Appendix D: Student Self-Efficacy Survey

Administer: whole class
Instruction: For this questionnaire I will read to you each question. Think about the question and fill in the face that you think is most like you. The smiley face is 'good', middle face is "not sure", grumpy face is 'not good'. Let us do the sample question.

Sample

How do you rate yourself as speller?   ☺ 😐 ☹

· ·

1. How do you feel when (teacher) asks the class do writing? ☺ 😐 ☹

2. How do you rate yourself as a writer? ☺ 😐 ☹

3. How do you feel about writing at home? ☺ 😐 ☹

4. When writing it is easy for me to get ideas ☺ 😐 ☹

5. Planning my writing before I start it is easy for me ☺ 😐 ☹

6. When writing it is easy for me to get started ☺ 😐 ☹

7. When writing it is easy for me to organize my ideas ☺ 😐 ☹

8. When writing I find it easy to write good sentences ☺ 😐 ☹

9. When writing it is easy for me to keep going ☺ 😐 ☹

10. When writing it is easy for me to correct my mistakes ☺ 😐 ☹

What topics do you most enjoy writing about? Why? _____

_____

_____

_____

Do you have/know any special 'tricks' to help you with your writing? What are they?

_____

_____

_____

_____

_____

Appendix E: Student small group interview

1. How do you feel when (teacher) tells the class they are going to do writing like a recount of an excursion or report or story?

2. Can you explain why you feel this way?

3. What do you enjoy about writing?

4. What do you dislike about writing?

5. Who do you think is a good writer? Why?

6. Have a think and tell me 'How do you plan yourself for writing (for example a story)'?

7. How do you organize your writing tasks?

8. If you are having trouble writing what kind of things do you do to help you get started?

9. Tell me about the best piece of writing you have done.

10. What do you like best about your own writing?

11. What part of writing do you do well?

12. What part of writing do you need to work on and improve?

13. Do you remember any strategies that you have learnt or your teacher has talked about that help you with your writing? Tell me about them

Appendix F: Writing Process Checklist

For this checklist you have to put a cross or a tick in the box. I will read to you each statement. You need to place a tick in the box by each action that you think you did while writing your narrative. A cross if you did not. Let us do the sample statement.
Sample:

☐ I started working right away

……………………………………………………………..

☐ 1. I read or listened to the teacher's directions carefully.

☐ 2. I asked the teacher to explain any part of the task that was unclear to me.

☐ 3. I said to myself in my own words what I was supposed to do.

☐ 4. I thought about who would read my paper.

☐ 5. I started planning my writing before I actually started writing it.

☐ 6. I used a strategy to help me plan my writing.

☐ 7. I tried to remember everything I already knew about this topic before starting to write.

☐ 8. I got all the information I needed before starting to write.

☐ 9. I thought about what I wanted my writing to accomplish as I wrote.

☐ 10. I thought about the reader as I wrote.

☐ 11. I checked to make sure that the reader would understand everything I had to say.

☐ 12. I revised the first draft of my writing.

☐ 13. I made my paper better by adding, dropping, changing or rearranging parts of my writing.

☐ 14. I corrected errors of spelling, capitals, punctuation and the like.

☐ 15. I used a strategy to help me revise my writing.

☐ 16. I reread my paper before turning it in.

☐ 17. I asked other students for help when I needed it.

☐ 18. I asked my teacher for help when I needed it.

☐ 19. I asked my parents or other people for help when I needed it.

☐ 20. I told myself I was doing a good job while I was working on my writing.

☐ 21. I rewarded myself when I finished the writing

Name _____

Class _____

Good writers use

POWER

Strategies we are learning to make us POWER writers
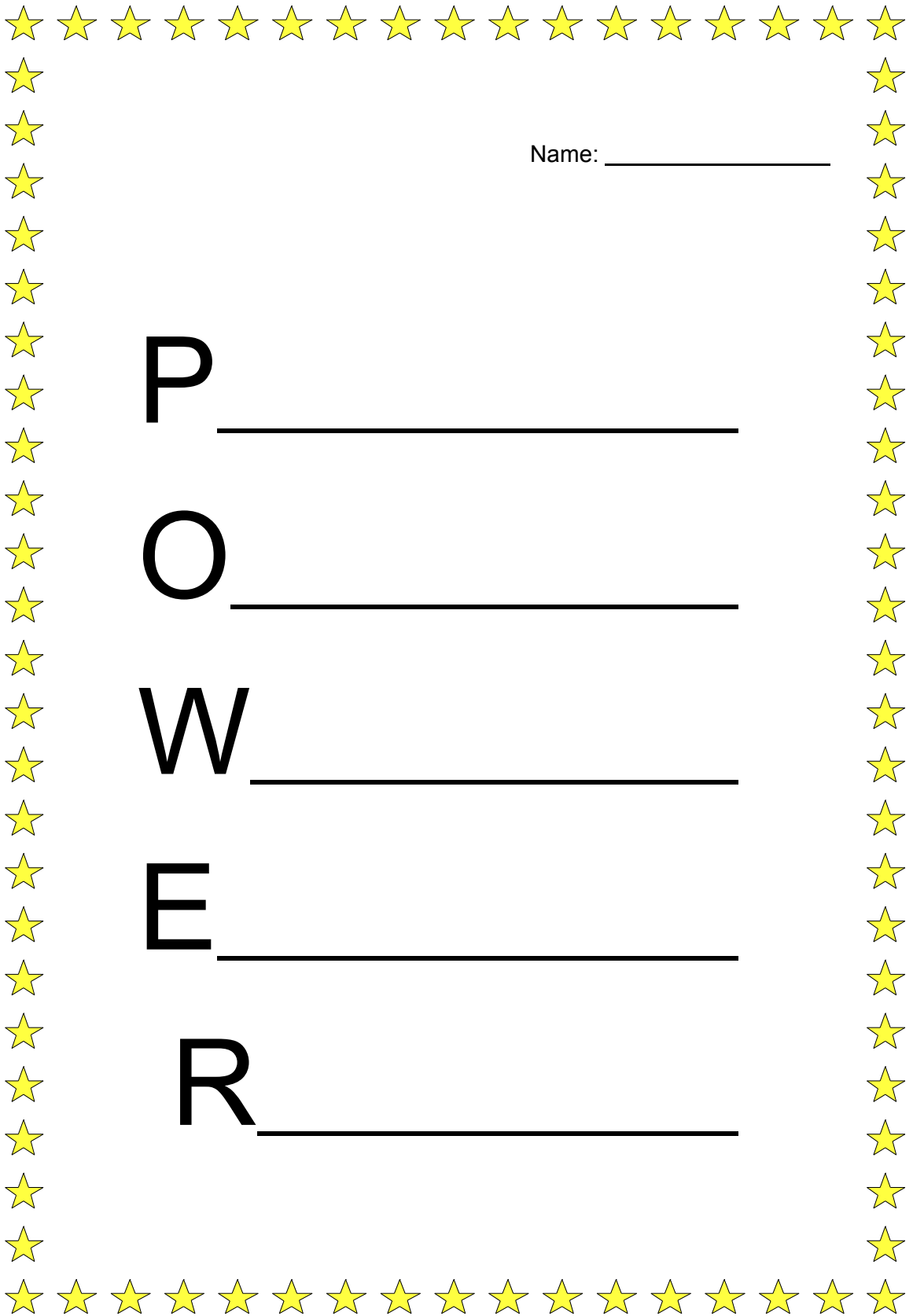
Name: _____

P_____

O_____

W_____
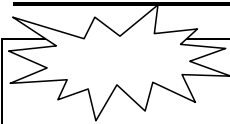
E_____

R_____
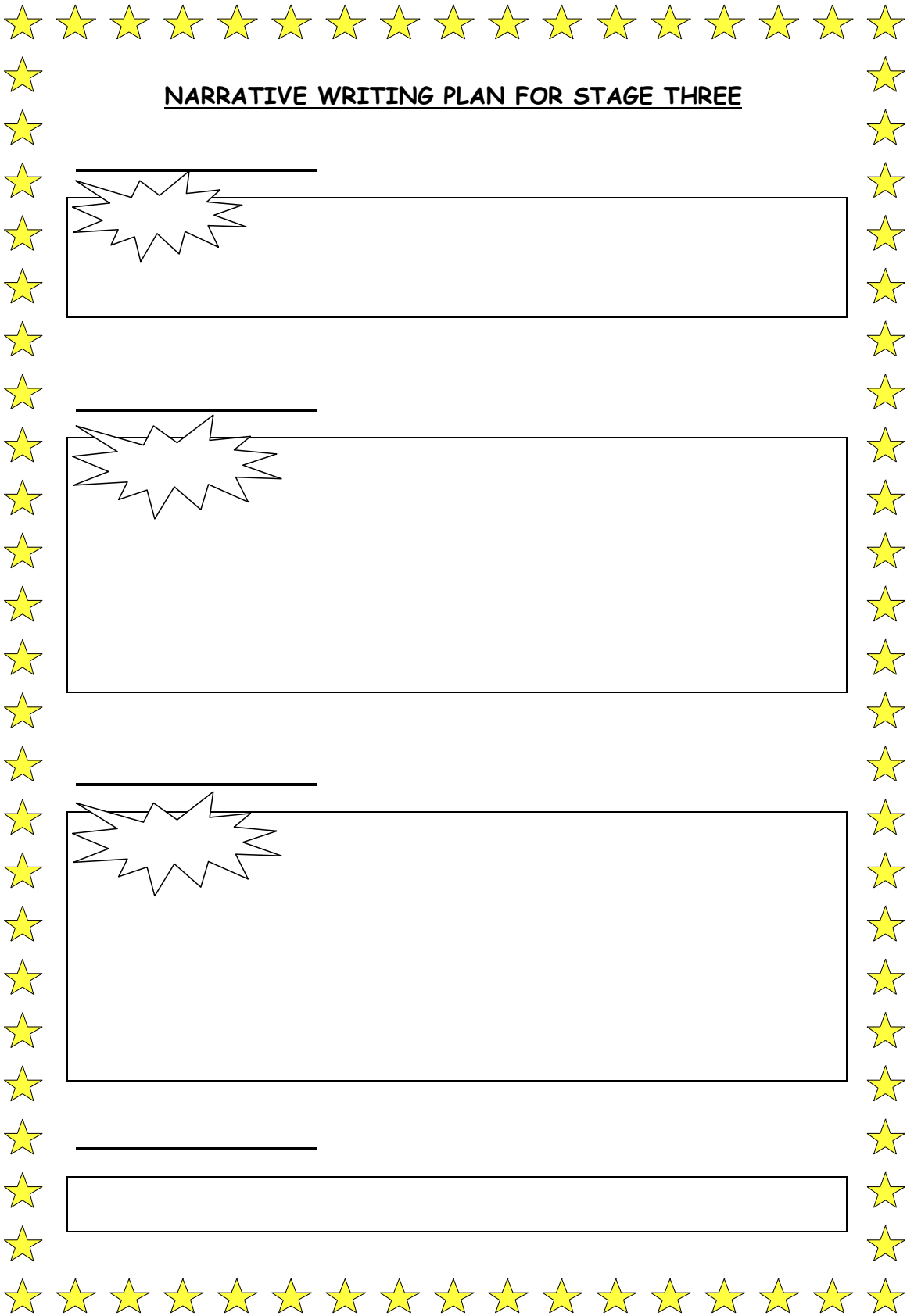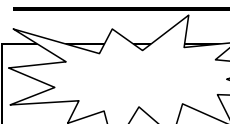
NARRATIVE WRITING PLAN FOR STAGE THREE

_____

_____

_____

_____

A Writing Plan is **POWER**

Before I write I must	**P**lan ideas **O**rganise my ideas

Text structure
 	
O   3Ws
 	
C   2 Whats
 	
R   2 Hows
	O Who, When, Where
	
	C What main characters do
	
	    What happens
	
	R How characters feel
	
	    How it ends

Vocabulary Interesting verbs, noun groups describing vocab	

My Writing Checklist

Name _____

What I need to think about

Before I write   (**PO**)

- o _____
- o _____
- o _____

While I am writing (**W**)

- o _____
- o _____
- o . _____

After I write (**ER**)

- o _____
- o _____
- o _____

<u>Vocabulary</u>

Wonderful Words I can use for

Size

****
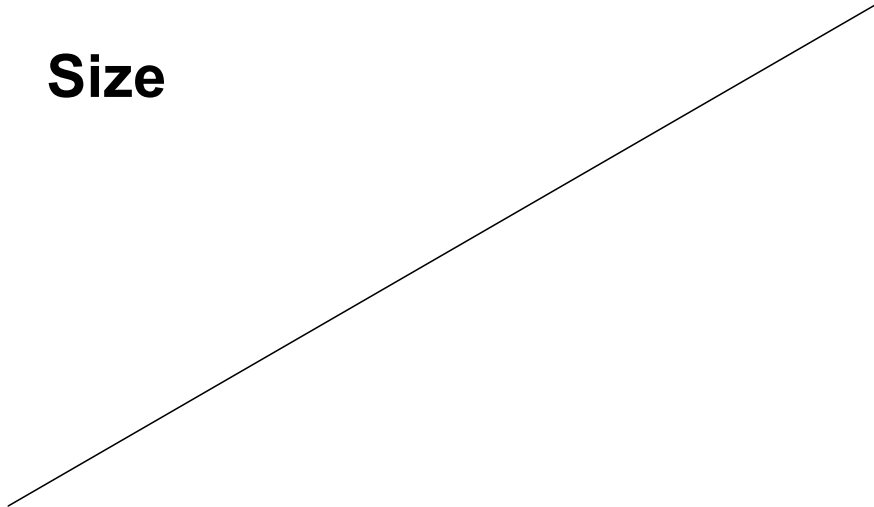
Sound
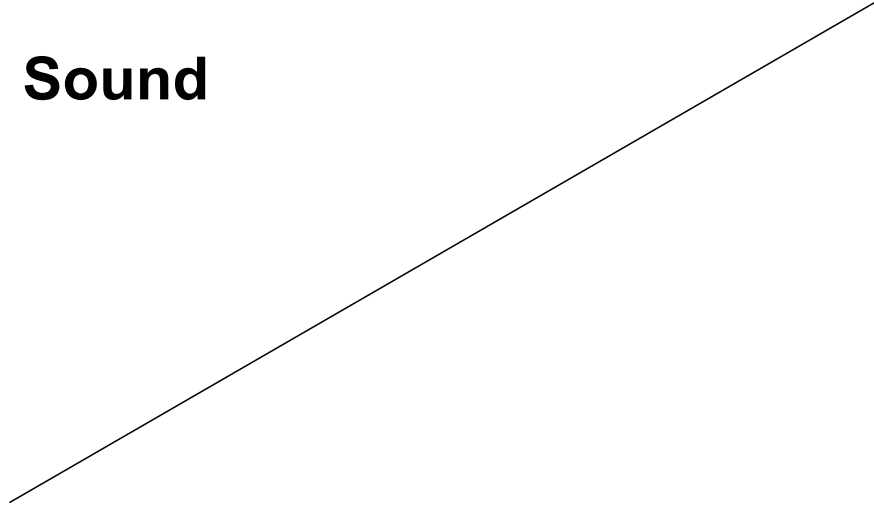
Dressed up Nouns

verbs   nouns   noun groups   phrases

We had a fantastic holiday in Sydney and we visited the two most spectacular tourist places in Sydney. These were the Opera House and Harbour Bridge.

Our exciting tour of Sydney included an hour-long ferry ride to the most interesting spots on Sydney Harbour. After we finished our exciting tour we were exhausted.

1. I was scared by the horribly loud howling wind outside my window.

2. Peter went to a music concert at the Sydney Opera House.

3. At the concert he saw his three most favourite bands.

4. The boys raced to the back grass playground and played a game of touch football.

5. The park near the railway station has a fantastic kids playground with a really high slippery-dip and a scary flying fox.

6. Before we visited the world famous Opera House on Sydney Harbour, we walked across the magnificent Sydney Harbour Bridge.

7. After Mrs Smith left the library she met a group of her friends and they went to the city for lunch.

Appendix H: The Planning Pyramid
Schumm, Vaughn and Leavell, 1994

Students	OCR Text structure	No more '& then's Sentence	Dressup a sentence Word	Self regulating Behaviours POWER
Some	*effective use of paragraphs *play with OCR	*variety complex sent	*12+ effective words *literary devices	Over 14 lessons work on students developing their own self regulating writing behaviours
Most	*select a variation Of OCR eg OCcrR *pronoun refer	*100% compound sent accuracy 　　*consistent tense use	*12 effective words *a literary devices	*Goal setting 　　　*Self statements *Self monitoring
All:	*all basic elements O 3W, C 2Whats, R 2Hows *Use of paragraphs *characters	*100% simple sent accuracy *2 compound sent *1 complex *sent punctuation *Subject/verb agreement?	*6 effective words (verbs/noun gps) *phrases (time, place)	

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Appendix I: Sample lessons

Lessons 1-4:

Lesson 1: a whole class brainstorm to record what they knew about writing a narrative (Develop background knowledge). This was recorded then used to introduce (Discuss it) the 'new' story plan and self-regulation ideas (POWER). A large class poster was created for the new, Stage 3 story plan, another for POWER (Support it).

Lesson 2: revisited the POWER poster and the Stage 3 story plan (these were permanently displayed in the classroom) (Support it). Talk aloud was used to model when and how to use them (Discuss it, Model it). Students drew up their own Stage 3 story plan proforma (Memorise it). Some familiar stories (fairytales) were analysed (as whole class then in pairs) in terms of the 'new' story plan (Model it, Discuss it). Students used their own story proforma to analyse elements of a fairy story. Students were asked to memorise the two mnemonics.

Lesson 3: Students attempt to write the two mnemonics, POWER and story plan (Memorise it). Less familiar stories were analysed (whole class on interactive whiteboard using different colour highlighters then in small groups) in terms of the 'new' Stage 3 story plan (Model it, Support it). Organisation was that the more capable students worked together (peer support) on different stories, the middle group worked with one teacher on more familiar stories, struggling students worked with second teacher on interactive whiteboard with clearly structured stories. At end of the lesson POWER was revisited (Memorise it) and the idea of self-regulation introduced (Discuss it) in terms of what writers need to do before (PO), during (W) and after (ER) they write (Discuss it)

Lesson 4: On the interactive whiteboard words and letters of POWER poster were jumbled, students had to sort into the correct format (Memorise it); before/during/after was reintroduce and what they might do before/during/after writing. Ideas were recorded in a display poster

(Appendix) (Discuss it). The POWER booklet was introduced to the class. Each student completed the POWER poster for their booklet (Memorise it).

Appendix I continued: Sample lessons

During lessons 6-10 on the interactive whiteboard the teacher used a basic piece of writing to deconstruct according to the 'new' Stage 3 story elements and noun groups. Story ideas and vocabulary were added to enhance the story (Model it), students practiced in small groups with teacher support (Support it). The students then analysed their own piece of writing (a typed copy of their pre assessment narrative) to make judgements as to Stage 3 story elements and noun groups (Independent). A graphic organiser was used to deconstruct the stories (Appendix A writing plan is POWER). Using this plan the students added other story ideas and descriptive language that they felt added to their story (Independent). This writing was also used to have the students set themselves writing and self-monitoring goals for before, during and after their writing (self-regulation). This was linked to the POWER strategy and lesson 4 ideas (Appendix J). Using their story, writing and self-monitoring goals were selected by the student during a one on one or small group conference with the study author (Discuss it, Support it). Each student wrote up their personal goals (Memorise it) and added to their POWER booklet (Appendix).

The value of SRSD is that it provides a structure that increases strategic knowledge about writing by explicitly and systematically teaching more sophisticated strategies to achieve successful writing.

Appendix J: Ethics Approval Letter

The University of Sydney

ABN 15 211 513 464

Human Research Ethics Committee
Web: http://www.usyd.edu.au/ethics/human

Marietta Coutinho
Deputy Manager
Human Research Ethics Administration

Telephone: +61 2 8627 8176
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Level 6
Jane Foss Russell Building – G02
The University of Sydney
NSW 2006 AUSTRALIA

Ref: PB/PE

30 September 2009

Associate Professor David Evans
Faculty of Education and Social Work
Education Building - A35
The University of Sydney
Email: d.evans@edfac.usyd.edu.au

Dear Professor Evans

Thank you for your correspondence dated 18 August 2009 addressing comments made to you by the Human Research Ethics Committee (HREC). After considering the additional information, the Executive Committee at its meeting held on **15 September 2009** approved your protocol entitled "*Self Regulated Strategy Development (SRSD): A Teaching Framework to Support Students*".

Details of the approval are as follows:

Ref No.: **09-2009/11851**
Approval Period: **September 2009 to September 2010**
Authorised Personnel: **Associate Professor David Evans**
Ms Robin Smith

The HREC is a fully constituted Ethics Committee in accordance with the *National Statement on Ethical Conduct in Research Involving Humans-March 2007* under *Section 5.1.29*

The approval of this project is **conditional** upon your continuing compliance with the *National Statement on Ethical Conduct in Research Involving Humans.* We draw to your attention the requirement that a report on this research must be submitted every 12 months from the date of the approval or on completion of the project, whichever occurs first. Failure to submit reports will result in withdrawal of consent for the project to proceed.

Special Conditions of Approval

Please provide the approval from the NSW Department of Education and Training when received.

Chief Investigator / Supervisor's responsibilities to ensure that:

(1) All serious and unexpected adverse events should be reported to the HREC as soon as possible.

(2) All unforeseen events that might affect continued ethical acceptability of the project should be reported to the HREC as soon as possible.

(3) The HREC must be notified as soon as possible of any changes to the protocol. All changes must be approved by the HREC before continuation of the research project. These include:-
- If any of the investigators change or leave the University.
- Any changes to the Participant Information Statement and/or Consent Form.

(4) All research participants are to be provided with a Participant Information Statement and Consent Form, unless otherwise agreed by the Committee. The Participant Information Statement and Consent Form are to be on University of Sydney letterhead and include the full title of the research project and telephone contacts for the researchers, unless otherwise agreed by the Committee and the following statement must appear on the bottom of the Participant Information Statement. *Any person with concerns or complaints about the conduct of a research study can contact the Deputy Manager, Human Ethics Administration, University of Sydney, on (02) 8627 8176 (Telephone); (02) 8627 8177 (Facsimile) or human.ethics@usyd.edu.au (Email).*

(5) Copies of all signed Consent Forms must be retained and made available to the HREC on request.

(6) It is your responsibility to provide a copy of this letter to any internal/external granting agencies if requested.

(7) The HREC approval is valid for four (4) years from the Approval Period stated in this letter. Investigators are requested to submit a progress report annually.

(8) A report and a copy of any published material should be provided at the completion of the Project.

Yours sincerely

Associate Professor Philip Beale
Chairman
Human Research Ethics Committee

cc: Ms Robin Smith   robin.smith@edfac.usyd.edu.au

Encl.   Approved Participant Information Statement - Principal
         Approved Participant Consent Form – Principal
         Approved Participant Information Statement – Teacher
         Approved Participant Consent Form – Teacher
         Approved Parent (or Guardian) Information Sheet
         Approved Parent or Guardian Consent Form
         Approved Teacher Interview questions

Appendix K: Study Consent Forms

The University of Sydney

Faculty of Education and Social Work

ABN 15 211 513 464

David Evans PhD
Associate Professor of Special Education

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University of Sydney NSW 2006
AUSTRALIA
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Facsimile: +61 2 9351 2606
Email: david.evans@usyd.edu.au
Web: www.usyd.edu.au/

PARENT (OR GUARDIAN) CONSENT FORM

I, ...
[Print Your Name]

agree to permit ...., who is aged .... years,
[Print Name]

to consent to participate in the research project:

Self Regulation Strategy Development

In giving my consent I acknowledge that:

1.   I have read the Information Statement and the time involved for my child's participation in the project. The researchers have given me the opportunity to discuss the information and ask any questions I have about the project and they have been answered to my satisfaction.

2.   I understand that I can withdraw my child from the study at any time without prejudice to my or my child's relationship with the researchers now or in the future.

3.   I agree that research data gathered from the results of the study may be published provided that neither my child nor I can be identified.

4.   I understand that if I have any questions relating to my child's participation in this research I may contact the researchers who will be happy to answer them.

5.   I acknowledge receipt of the Information Statement.

6.   I consent to:
i)   my child participating in an interview. [I note that some students will be interviewed, and these students will be selected at random.]   Yes   ☐
        No   ☐
        a)   Audio-taping (if interviewed)   Yes   ☐   No   ☐
ii)   Receiving Feedback to project   Yes   ☐   No   ☐
        If you answered YES to the "receiving Feedback Question (ii)", please provide your details (i.e., mailing address, email address)

<u>Feedback Option</u>

Address: _____

.   _____

Email: _____

_____   _____
Signature of Parent/Guardian   Signature of Child

_____   _____
Please PRINT Name   Please PRINT Name

_____   _____
Date   Date

The University of Sydney

PARTICIPANT CONSENT FORM

I, ...
[Print Your Name]

give consent for students at my school ....
[Print Name of School]

to participate in the research project: *Self Regulated Strategy Development*

In giving my consent I acknowledge that:

1.   The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.

2.   I have read the Participant Information Statement and have been given the opportunity to discuss the information and the involvement of students in the project with the researchers.

3.   I understand that I can withdraw my school's participation from the study at any time, without affecting my relationship with the researchers or the University of Sydney now or in the future.

4.   I understand that the involvement of students at my school is strictly confidential and no information about my school or students will be used in any way that reveal their identity.

5.   I understand that being in this study is completely voluntary – I am not under any obligation to consent for the involvement of students at my school.

_____
Signature of Participant

_____
Please PRINT Name

_____
Date

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PARTICIPANT CONSENT FORM

I, ...
[Print Your Name]

give consent to my participation in the research project:

Self Regulated Strategy Development

In giving my consent I acknowledge that:

1.   The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.

2.   I have read the Participant Information Statement and have been given the opportunity to discuss the information and my involvement in the project with the researcher/s.

3.   I understand that I can withdraw from the study at any time, without affecting my relationship with the researchers or the University of Sydney now or in the future.

4.   I understand that my involvement is strictly confidential and no information about me will be used in any way that reveal my identity.

5.   I understand that being in this study is completely voluntary – I am not under any obligation to consent.

6.   I understand that I can stop the interview at any time if I do not wish to continue, the audio recording will be erased and the information provided will not be included in the study.

7. I consent to: -
   i) Audio-taping   Yes   ☐   No   ☐
   ii) Receiving Feedback Yes   ☐   No   ☐
   If you answered YES to the "receiving Feedback Question (ii)", please provide
   your details (i.e., mailing address, email address)

   <u>Feedback Option</u>

   Address: _____

   . _____

   Email: _____

   _____
   Signature of Participant

   _____
   Please PRINT Name

   _____
   Date

Appendix L: Student Responses to *Student Self-efficacy Survey*

Treatment group

Pre-intervention	Follow-up
Look at some posters in the classroom	Use better vocabulary, the big OCR and the little c and remember things before, while and after I write (Tyson)
No	I have a power book and they all help me with what to do first and last. Power stands for plan, organize, write, edit and rewrite for mistakes (Zuhour)
No I don't	Befor(sic) I start I think about my writeing(sic) and plan how I will write it. I think of the compercation(sic) ferst(sic) when is done I do resalotion(sic) and last the oreentaton(sic) (Zayne)
No	I learned(sic) to use punchuation(sic) and edit your work. I learned(sic) about what do I do before I write and while I write and after I write. I learned(sic) bout the three w's(sic) and the to How's(sic) and the big O,C,R,C. They are the things you need to remember when your(sic) writing a narrive(sic) (Lachlan)
I try to keep my sentences interesting and on the topic	I knew how to use the brainstorm of my imagination and the OCR strategy. I plan in the Who, When, Where in my orientation (Jun)
I watch movies or read books then I change it and add my own ideas	My trick is I imagine I'm in the story. When I write I think of the OCR strategy and about who I'm writing for. I try to remember my punctuation and the exciting noun groups (vocabulary) (Toao)

Comparison group:

Pre-intervention	Follow-up
Easy for me to keep on going with my spelling	Befor(sic) I start I think about everything I do. (Sammy)
Yes I get my ideas from dreams.	Yes use other stories that you have read before. (Natalie)
Brain sorm(sic), writing in point form and asking myself what is this story going to be about.	Using bullite(sic) point and not writing in full sentences. So when I start writing I just add words. (Taylah)
with my writing befor(sic) I started I have to think befor(sic) I started my story. I have cheak(sic) my spelling, capital letters and punctuation.	Use planning page before writing to help me with my story (Zahra)
I use spelling mistakes to help me write becaus(sic) I can correct it easily	My special trick of writing is spelling mistakes because I write it to help me with my ideas and correcting my work. (Yasir)
Make a good start.	Before writing I plan my writing in points to show which one comes first and last. So I don't get lost when writing so don't waste time. (David)