What is critical in the effective teaching of writing? A study of the classroom practice of some Year 5 to 8 teachers in the New Zealand context

Murray Olsen Gadd

A thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy in Education

The University of Auckland

2014

Abstract

This study ascertains what a small but purposefully selected set of highly effective teachers have done in authentic learning settings to promote higher than anticipated outcomes in writing for a set of Year 5 to 8 New Zealand students. Results of quantitative and qualitative analysis of observed teacher practice in relation to learner gains data have been utilised to generate a connected set of indicators (namely, some key dimensions of effective practice and related instructional strategies) that are strongly associated with optimum student achievement. Results are illustrated by reference to rich case study material.

Teacher effectiveness data were analysed in relation to eight dimensions of effective practice and related instructional strategies, as generated from a critical reading of research literature on effective writing instruction: *Expectations*; *Learning Goals*; *Learning Tasks*; *Direct Instruction*; *Responding to Learners*; *Engagement and Challenge*; *Organisation and Management*; *Self-regulation*. Analysis suggested that effective teachers of writing employ all dimensions in strategic combination with each other. The apparent effectiveness of each dimension may well be contingent on its inter-connectedness to other dimensions within the same pedagogical context.

Analysis also suggested a particularly strong association between the proficient operation of two dimensions (*Learning Tasks* and *Direct Instruction*) and learner gains over time. It also suggested a strong association between three dimensions (*Self-regulation*, *Responding to Students*, and *Organisation and Management*) and decreased levels of learner achievement variance. *Self-regulation* emerged from the analysis as the dimension with the greatest operational variance between teachers.

In addition, an analysis of related instructional strategies suggested that effective teachers of writing employ an inter-connected range of pedagogical actions in a strategic and flexible way. It particularly suggested that instructional writing actions and activities are effective if regarded as *purposeful by learners* and if they include meaningful opportunities for *learner involvedness*.

Findings of the study apply to strategies for generating higher than anticipated gains by all learners in writing, including cohorts most at risk of under-achievement. But some differentiation of strategies appears to be necessary for achievement by under-achieving cohorts, particularly within the dimensions of *Learning Tasks* and *Direct Instruction*.

Acknowledgements

This thesis has benefitted greatly from the feedback and suggestions of my research supervisors Professors Judy Parr and Stuart McNaughton. Their knowledge and experience has assisted me hugely in delving deep for content and structure. Thanks also to Dr Kane Meissel who acted as advisor on data analysis and interpretation.

I would also like to acknowledge the contributions of all teacher participants (and their students) in this study. Though anonymous in the presentation of the research, I greatly appreciated how they participated fully and openly, and continually strived for excellence. I commend their total commitment to positive outcomes for students.

I wish also to acknowledge my literacy facilitator colleagues who nominated teacher participants for the study, and especially those (Kate Birch and Gillian Bertram) who acted as external experts for all auditing acts undertaken in the study. Their enthusiasm and expertise was greatly appreciated.

I also acknowledge the assistance I received from Academic Consulting Ltd. for formatting and proof-reading the thesis.

Finally, I wish to acknowledge my partner Bruce who supported and encouraged me during every step of the long research journey.

Table of Contents

List of Tables

Chapter 1: Introduction

1.1. Background: The level of under-achievement of written language amongst Year 5 to 8 students in the New Zealand context

There is evidence that many New Zealand primary- and secondary-age students are under-achieving when attempting to communicate through written language (Crooks, Flockton, & White, 2007; Gilmore & Smith, 2011; Ministry of Education, 2006). "Under-achievement" is evident when students cannot demonstrate the age-commensurate knowledge and skills (as defined by the Ministry of Education) needed to meet the writing demands of the *New Zealand Curriculum* (Ministry of Education, 2007, 2009, 2010).

An analysis of writing from a nationally representative sample of approximately 21,000 Year 5 to 12 students during 2001–2005, as part of the standardisation of the Assessment Tools for Teaching and Learning (asTTle) project (University of Auckland, 2005a), indicated under-achievement at a significant level. As reported in an overview of writing achievement across New Zealand (Ministry of Education, 2006), this was especially evident when students' progress in writing was compared to their progress in reading and mathematics. The analysis indicated that:

> Average achievement of students in writing increased an average of 37 [asTTle writing] points a year … This was much lower than the average yearly improvement seen in mathematics (62 points) and reading (53 points). Average achievement in writing only reached curriculum Level 4 in year 11/12, whereas it reached Level 5 in reading and mathematics by the same time. (p. 2)

The analysis also indicated particular under-achievement by boys and by Māori and Pasifika students (Māori are the indigenous or first nations people of New Zealand and Pasifika is a term used by many educators to identify people who have ethnic links with the Pacific nations). The analysis concluded that:

> Girls achieved higher than boys in writing throughout all years of schooling… [and the] difference between boys and girls was consistently much larger in writing than for reading or mathematics…[and that] Pakeha/New Zealand European and Asian/Other students had higher average writing scores than Māori and Pasifika students. The difference, on average, was around 30 points, or one year. (p. 4)

The scoring system in the asTTle writing tool categorises students within a level as *basic*, *proficient* or *advanced*. With particular regard to achievement by Year 5 to 8 students, the analysis indicated that the mean asTTle writing score for Year 5 students equated with New Zealand curriculum Level 2 *proficient*, Year 6 and 7 achievement with curriculum Level 2 *advanced*, and Year 8 achievement with curriculum Level 3 *basic* (University of Auckland, 2006a, p. 2). In all cases, these levels were considerably lower than achievement expectations signalled in the *New Zealand Curriculum* (Ministry of Education, 2007, p. 45) and its accompanying documents (Ministry of Education, 2009, 2010).

The authors of this analysis concluded that:

> The most striking result from the analysis of the writing data was the large number of students who wrote poorly and that this persisted throughout intermediate and secondary years. Although there were students who excelled at writing each year, the data suggests [sic] many students did not improve in writing over the years. This indicates a need for further explicit instruction in writing. (p. 7)

More information on progress in written language by older primary-age students is contained in the most recent reports on writing by the National Education Monitoring Project (Crooks et al., 2007; Gilmore & Smith, 2011).

The authors of the 2007 report concluded that although many of the 2,880 Year 4 and Year 8 students assessed in writing during 2006 achieved at a higher level than did the 2,868 Year 4 and Year 8 students assessed in writing during 2002, "most students [in 2006] were not able to achieve the clarity, richness and personal feeling or humour that distinguished top quality writing" (Crooks et al., 2007, p. 3).

They also concluded that boys in the study achieved at a lower level than did girls (with, for example, a mean effect size difference of 0.33 for Year 8 students); that New Zealand European students achieved at a moderately higher level than did Māori students (with a mean effect size difference of 0.23 for Year 8 students); and that New Zealand European students also achieved at a moderately higher level than Pasifika students achieved (with a mean effect size difference of 0.29 for Year 8 students).

Although some growth in achievement since 2006 for both Year 4 and Year 8 students was noted in the 2011 report (especially around the surface features of writing), the growth was minimal. The authors of the 2011 report concluded that overall "there has been no real

change in [writing] performance at year 4 or year 8 over time" (Gilmore & Smith, 2011, p. 13). They calculated, for example, an average effect size difference of just 0.06 between 2006 and 2010 for Year 8 students. They also noted that the "same subgroup differences were broadly evident in 2006 and 2010 for gender [and] ethnicity" (p. 34).

More recently, the New Zealand Ministry of Education reported on its *Education Counts* website (http://www.educationcounts.govt.nz/topics/121981/122072) that only 65.6% of Year 5 to 8 students demonstrated or exceeded the age-commensurate expectations (as defined by the Ministry) needed to meet the writing demands of the *New Zealand Curriculum* (Ministry of Education, 2007, 2009, 2010) according to achievement data aggregated nationally in mid-2013. This ranged from 67.1% of Year 5 students to 69.5% of Year 6 students, and from 60.9% of Year 7 students to 64.7% of Year 8 students, indicating particularly that "achievement in Years 7 and 8 is notably lower than other year levels". The Year 5 to 8 achievement level for writing (65.6%) was significantly lower than that for reading (77%), and somewhat lower than that for mathematics (68.6%). The Ministry also reported a large gap (15.2%) between overall achievement levels demonstrated by girls and by boys, and that achievement for Māori and Pasifika students "is much lower than for the majority – roughly 10% to 15% worse". Although these data indicated upward movement of approximately 2% in relation to the previous year's data, they still suggested an alarming position of under-achievement by one in three Year 5 to 8 students for writing. This needs to be continually addressed by educators.

This position of under-achievement is not, however, unique to New Zealand. Recent reports indicate that it is reasonably closely mirrored in the United States and the United Kingdom. The United States' most recent five-yearly Report Card on writing achievement, published by the National Center for Education Statistics (2012), analysed achievement for grade eight and grade twelve students across the country. Of eighth graders (students in their final year of middle schooling) who were tested, it concluded that almost three-quarters were achieving slightly below or well below the expected level of proficiency. In particular, 3% achieved at the *Advanced* level of writing, 24% at the *Proficient* level, 54% at the *Basic* level and 20% at the *Below Basic* level. Although the report does not define the *Below Basic* level, the *Basic* level is defined as "partial mastery of the prerequisite knowledge and skills that are fundamental for proficient work" (p. 2). As reported by the United Kingdom's Department for Education (2012), the position in the United Kingdom appears to be more positive in that at Key Stage 2 (students in Years 4 to 6 of their primary schooling), 81% of

students achieved the expected level of proficiency based on teacher assessments in 2012. This compares to 75% achieving the expected level in 2011 based on national test results. But the report concluded that "writing is the subject with the worst performance compared with reading, maths and science at Key Stages 1 and 2" (p. 3).

1.2. Purpose and rationale of the research study

The principal purpose of this research study is to identify and describe those features of teachers' literacy teaching practice that are critical in generating higher than anticipated outcomes in writing by Year 5 to 8 students. This principally means investigating the dimensions of effective practice and related instructional strategies that effective teachers of writing employ. The central phenomenon being explored in the study, addressed largely as a consequence of the reported position of under-achievement in writing, relates to "what effective teachers of writing actually *do* that makes a difference".

This includes making a difference for "all students", but especially those cohorts most at risk of under-achievement in writing. As noted in the national achievement information reported above, those most at risk within the New Zealand context are particularly boys, Māori students and Pasifika students. Although the study is contextualised within New Zealand, it is anticipated that many of its findings will apply internationally.

A number of researchers have suggested over time that it is important to investigate aspects of effective pedagogy in order to address issues of under-achievement by learners (Berliner, 2001, 2004; Block & Mangieri, 2003; Bond, Smith, Baker, & Hattie, 2000; Grossman, Loeb, Cohen, & Wyckoff, 2013; Medwell, Wray, Poulson, & Fox, 1998; Shulman, 1987). By investigating the effective pedagogy of others, teachers can inquire into the effectiveness of their own pedagogy so as to help them address issues of under-achievement by learners. This requires them to access the effective practice of others, understand what makes a difference, and deconstruct exemplary practice so as to make links between it and their own practice (Grossman et al., 2013). In their analysis of the relationship between effective literacy practice and student achievement, Grossman and colleagues (2013) suggested that "identifying classroom practices associated with more effective teachers and then targeting these practices ... provides a potential avenue for improving the quality of instruction for all students" (p. 449). As stated by Medwell and colleagues (1998), "A great deal can be learned from a study of those primary teachers identified as effective in the teaching of literacy" (p. 4).

The research was undertaken by gathering data from a small but purposefully selected set of Year 5 to 8 teachers (and their students) whose previous achievement information suggested that they were effective at generating higher than anticipated outcomes for learners in writing. Throughout the study, these teachers are referred to as a set of "exceptional" teachers (a term borrowed from Creswell, 2008, p. 216). Data were gathered through a schedule of lesson observations and interviews with key participants and analysed in relation to an *a priori* framework of indicators generated from a wide and critical reading of research-based literature on effective literacy pedagogy. Data were also analysed in relation to an extensive set of norm-referenced achievement information from each teacher, indicating movement by his or her students in writing over time.

There is evidence of a wide range of teacher and learner-related variables that influence student achievement in writing. Teacher-related variables include the level of literacy content knowledge that teachers hold (Ball, Thames, & Phelps, 2008; Medwell et al., 1998; Shulman, 1987), their knowledge of their students as learners (Black & Wiliam, 1998; Symes & Timperley, 2003), their beliefs about literacy teaching and learning (Berry, 2006; Medwell et al., 1998; Poulson, Avramidis, Fox, Medwell, & Wray, 2001), their knowledge of effective pedagogy (Berliner, 2001, 2004; Bond et al., 2000; Grossman et al., 2013; Medwell et al., 1998) and their personal disposition and professional aptitudes (such as their academic orientation and enthusiasm) for teaching and learning (Berliner, 2004; Bransford, Derry, Berliner, & Hammerness, 2005; Cremin & Baker, 2010; Schwartz, Bransford, & Sears, 2008). Learner-related variables include learners' levels of cognitive and metacognitive development (Bereiter & Scardamalia, 1987; Flower & Hayes, 1981; Hayes, 2000), their levels of social, emotional and language functioning (Pianta & Hamre, 2009) and their sense of self-efficacy as developing writers (Butler & Winne, 1995; Craven, Marsh, & Debus, 1991).

This study, however, focuses on those variables that pertain to what teachers (rather than students) actually *do* in the classroom with respect to the effective teaching and learning of writing; namely, the dimensions of effective practice and instructional strategies that they employ. It is based on a belief that teachers make a difference to student achievement, particularly through the quality of their pedagogy (Alton-Lee, 2003; Darling-Hammond, 1999; Hattie, 2003). In her report to the New Zealand Ministry of Education on quality teaching for diverse learners, Alton-Lee (2003) concluded that "Quality teaching … is the most influential point of leverage on student outcomes" (p. 2) and that high achievement for

diverse groups of learners is "an outcome of the skilled and cumulative pedagogical actions of a teacher in creating and optimising an effective learning environment" (p. 1). There is considerable research evidence that the quality of teacher pedagogy is a critical factor in making a difference for students.

1.3. Some warnings about over-analysis

Although it was anticipated that features of effective literacy practice would be identified through the study, it was recognised from the outset that they should not be considered as discrete pedagogical entities within defined classroom teaching and learning contexts. As a range of researchers have indicated, the apparent effectiveness of particular dimensions and strategies of literacy practice may well be contingent on their inter-connectedness with other dimensions and strategies (to varying but unknown degrees) within the same pedagogical context (Hall & Harding, 2003; Hillocks, 1986; Marzoni, 1998; Parr & Limbrick, 2010).

It is, in fact, detrimental to student achievement to place inappropriate levels of operational emphasis on any identified feature of instructional practice (Alton-Lee, 2003). Evidence suggests (for example) that involving students in the construction of writing tasks enhances learner gains. But placing excessive emphasis on pedagogical acts pertaining to task construction may generate as many learning problems for students as does placing insufficient emphasis on it. As explained by Alton-Lee (2003) in the introduction to her report on quality teaching:

> When too little or too much of a teacher behaviour or learning opportunity occurs, learning can be impeded....Most variables for which there are positive relationships to learning are positive because the behaviours occur sufficiently, appropriately and responsively to enable learning. (p. 14)

Too much (or too little) focus on a particular pedagogical feature can undermine student achievement.

1.4. Links with other studies

Similar studies to this study have been undertaken in other countries, particularly the United States and the United Kingdom. Some representative studies include Allington & Johnston, 2000; Block & Mangieri, 2003; Grossman et al., 2013; Hall & Harding, 2003; Langer, 2001; Medwell et al., 1998; Pressley et al., 1998; Pressley, Yokoi, Rankin, Wharton-McDonald, & Mistretta, 1997; Raphael, Pressley, & Mohan, 2008; Taylor, Pressley, & Pearson, 2000.

Some of these studies, however, discussed the teaching of writing only as a component of effective literacy teaching. For this section of the current study, only comments in the studies that relate to instructional writing are considered for the discussion that follows.

An analysis of these (and other) representative studies indicates that although there is agreement on the broad approaches that constitute effective literacy practice, there is considerable variation between them when noting pedagogical actions that are strongly associated with positive outcomes for learners. When discussing teacher effectiveness as a pedagogical phenomenon, Palardy & Rumberger (2008) concluded that "although there is general agreement that teachers make a difference, there is a lack of consensus about which aspects of teachers matter most" (p. 112). Langer (2001), in her analysis of middle-school and high-school teachers who "beat the odds" as literacy teachers, contended that "expert teaching should be viewed in terms of a prototype that allows for considerable variation in the profiles of individual experts" (p. 855).

To varying degrees, all of the representative studies suggest the importance of teachers acting as motivators, engagers, scaffolders, instructors, organisers, managers and assessors as they guide students strategically and purposefully toward proficiency as writers. But there is variation in the level of importance that studies attribute to some instructional strategies over others when reflecting on how teachers undertake these pedagogical roles. Whereas, for example, all of the studies nominate differentiated and flexible instruction (in some form) as highly important to the effective teaching of writing, only four (Allington & Johnston, 2000; Block & Mangieri, 2003; Hall & Harding, 2003; Pressley et al., 1998) discuss at length teacher actions that promote self-regulation by students as part of flexible instruction. All recognise the importance of teachers holding and communicating high expectations for achievement by students, but only four (Allington & Johnston, 2000; Grossman et al., 2013; Hall & Harding, 2003; Langer, 2001) discuss explicitly the importance of teachers engaging students through task challenge in order to meet expectations. Although all nominate the concept of direct or explicit instruction by teachers as central to the effective teaching of writing, only two (Grossman et al., 2013; Medwell et al., 1998) explore in depth the concept of demonstrating or modelling to students as a key pedagogical component of direct or explicit instruction. Not mentioning a particular pedagogical action does not necessarily imply that researchers consider it unimportant, but variation in emphasis between studies can lead to a sense of inconclusiveness about what is essential to being an effective teacher of writing.

The sense of inconclusiveness is further promulgated by the variation in methodologies employed in studies, especially when they are not syntheses of others' studies. Although all 10 representative studies are reports or reviews (in some form) of effective pedagogy generated by an analysis of qualitative and some quantitative data, the data have been collected and analysed in markedly different ways. In some studies, the subjects of effective pedagogy have been nominated by "expert others" (Allington & Johnston, 2000; Block & Mangieri, 2003; Pressley et al., 1997) and in others they have been selected empirically through value-added student achievement data (Grossman et al., 2013; Medwell et al., 1998). Some have employed self-reporting (through interviews or questionnaires) as their principal data-gathering method (Pressley et al., 1997), while others have principally employed classroom observations (Langer, 2001; Medwell et al., 1998). One has employed a strategically devised combination of observations and self-reporting (Grossman et al., 2013). Although utilising such variations in data-collecting methods can strengthen results if the theory that underpins the studies is robust and they all lead to similar conclusions, they can also generate notions of "untrustworthiness" if there is any disagreement about conclusions made (Lincoln & Guba, 1985; Tashakkori & Teddlie, 1998).

Furthermore, each representative study is located in a particular geographical context, mainly the United States but also the United Kingdom. This is important to note because geographical context can significantly affect the meaning that readers take from studies. Hall & Harding (2003) suggested in their international review of effective literacy practice that "all education systems are contextually bound and what applies in one may not necessarily be found in another" (p. 4).

Hence the purpose of this study was not only to identify and describe those features of teachers' literacy teaching practice that are critical in generating higher than anticipated outcomes in writing for diverse Year 5 to 8 learners, but also to make content and methodological links with other comparable studies. In particular, this meant comparing and contrasting the results that emerged from this study with the results of similar studies, and searching for and noting points of agreement, contradiction and omission between datasets and how they have been developed. It is anticipated that linking critically to other studies will help to generate a coherent and connected set of features strongly associated with effective literacy instruction that are reliably contextualised within Year 5 to 8 classrooms.

1.5. Demonstrating effectiveness

Understanding the results will require a shared understanding of the broad concept of *being effective* as a teacher. For the purpose of this study, the concept of being effective principally relates to teachers demonstrating a capability to generate a positive impact on learner outcomes, whether academic or social outcomes (Chetty, Friedman, & Rockoff, 2011; Pianta & Hamre, 2009; Rivkin, Hanushek, & Kain, 2005). The focus of this study was on teachers' capability to generate higher than anticipated *academic* outcomes. Hanushek (2002), in his exploration of school quality, stated that "good teachers are ones who get large gains in student achievement for their classes; bad teachers are just the opposite" (p. 3).

Teacher effectiveness linked to positive outcomes for learners can be indicated in two ways. It can firstly be indicated by noting the inter-connectedness of teachers' deliberately selected pedagogical strategies (such as questioning, prompting, demonstrating, explaining and giving feedback) and learners' emerging cognitive actions (such as being able to plan, craft and re-craft texts independently) as they move toward being proficient, self-regulated and metacognitive (Darling-Hammond, 1999; Glaser, 1985, 1990, 1996; Palardy & Rumberger, 2008; Pianta & Hamre, 2009). It may be, for example, that learners are able to plan written texts proficiently because the planning processes have been clearly demonstrated and explained to them by the teacher.

Secondly, it can also be indicated through strategic use of norm-referenced assessment tools that empirically demonstrate either value-added learner gains over time or more equitable learning outcomes for learners over time (Alton-Lee, 2003; Banks et al., 2005; Garcia & Guerra, 2004). Achieving more equitable learning outcomes is particularly significant when linked with ongoing acceleration of learner gains for a cohort, signalling gains over time by (almost) all within the cohort but a particular acceleration of gains by the lowest achieving learners in the cohort (Tashakkori & Teddlie, 1998; Trochim & Donnelly, 2007).

Both ways of noting teacher effectiveness were utilised through this study. With regard to teacher and learner actions, data were gathered principally through lesson observations and interviews, and inferences drawn from them. The inferences were drawn mainly from measures of central tendency, variability and correlation. Illustrations and exemplifications of teachers and learners in operation were also developed. In addition, a norm-referenced

assessment tool was used to identify learner gains or more equitable outcomes for learners so as to further signal teacher effectiveness.

As implied previously, it is not possible to identify direct causality between particular or discrete teacher actions and learner outcomes. This is principally because of the previously discussed understanding that teacher actions within the classroom context need to be considered as part of an inter-connected pedagogical whole (Tashakkori & Teddlie, 1998). But it is also because of the small sample of purposefully selected teacher participants in the study and the use of non-parametric analysis processes throughout it (Devore & Peck, 2005; Erceg-Hurn & Mirosevich, 2008).

But it is anticipated that the study will proffer a range of strong probabilities and likelihoods as to why some Year 5 to 8 learners are attaining higher rates of progress in writing than others are attaining. Given the relatively low levels of achievement in written language across New Zealand (and other countries) discussed above, it is important that a range of strong probabilities and likelihoods be generated. As explained by Grossman and colleagues (2013), although non-parametric analysis cannot indicate direct causality, it can "establish a credible hypothesis that....aspects of classroom practice may meaningfully improve student achievement" (p. 457).

1.6. Structure and organisation of the study

Having determined a research goal and a rationale for addressing it, the first task (**Chapter 2**) will be to ascertain what constitutes effective literacy pedagogy (within the context of instructional writing) according to a close reading of strategically selected research literature. This will assist recognition of the features of effective practice demonstrated by teachers in this study by providing a lens through which to look at the concept of effective practice. Teacher practice will be considered in relation to some broad dimensions of effective practice that teachers operate within and some specific instructional strategies that they utilise as they interact with learners. The list of dimensions and instructional strategies will be developed through **Chapter 2**.

The next task will be to confirm an appropriate research design for the study and ascertain the research actions that will be undertaken to determine findings (**Chapter 3**). It is anticipated that actions taken will incorporate a blend of qualitative and quantitative research processes. Quantitative research actions will be largely undertaken to signal or foreground aspects of literacy practice that appear to warrant in-depth qualitative research.

The selection of research actions will be partially guided by the actions that authors of similar studies have implemented effectively.

Chapters 4, 5, 6 and **7** will be a discussion of the study results. **Chapter 4** will provide a quantitative overview of the key dimensions of effective practice that appear to be significantly associated with higher than anticipated learning gains and more equitable learning outcomes in writing, given the previously discussed limitation of considering dimensions in isolation. **Chapter 5** will explore further the significance of those dimensions that correlate with learner gains. This will mean discussing them operationally within the context of authentic and purposeful instructional writing settings. **Chapter 6** will similarly explore further the significance of those dimensions that correlate with more equitable outcomes for learners. **Chapter 7** will provide a study of the other dimensions of effective practice, focusing on classroom application of their key instructional strategies.

The final task (**Chapter 8**) will be to return to the research goal and ascertain whether it has been met. This will involve not only summarising key findings about the critical features of effective writing instruction but also contextualising these within other researchers' theoretical and empirical findings.

Chapter 2: Building a conceptual framework for undertaking the research

Having ascertained that there is a well-established but diverse body of knowledge that describes effective literacy pedagogy, and having signalled the need to use this knowledge set to enhance understanding of teaching practices that emerge from the study, it is necessary to synthesise the body of knowledge into a conceptual framework that can be used for analysing and understanding aspects of pedagogy that are observed. It will be necessary, however, to scan the body of knowledge for specific references to the teaching of writing, whether these are contained in discrete studies or as segments of wider literacy studies.

In this chapter, the focus is on describing how the framework was developed and what its major components are. A range of research issues that arose through development of the framework will also be discussed. The questions that drive the chapter are: What does the research literature say about the exemplary teaching of literacy and particularly writing? How can this knowledge set be incorporated into a conceptual framework that embodies the exemplary teaching of writing? How might this framework guide research within the study? Whenever possible, empirically driven research literature will be referenced to form conclusions about the exemplary teaching of writing.

2.1. How the framework was developed

Developing the framework was begun by undertaking a review of international studies (principally from journals and books) on what effective teachers of literacy, particularly writing, appear to do in their pedagogical interactions with learners.

Phase one of the process involved collecting for review the studies that appeared to be most closely aligned to the key research goal that guides this study; namely, to identify and describe the nature of those features of teachers' literacy practice that are critical to generating higher than anticipated outcomes in writing for Year 5 to 8 learners. This involved undertaking a thorough search of academic catalogues, education-related databases (especially ERIC, PsycINFO, Index New Zealand, British Education Index) and citation indexes using combinations of the following keywords and search items: effective; literacy; writing; teacher; adolescent; pedagogy; instructional practices or strategies; learner

outcomes; primary (or elementary) school; intermediate (or middle) school. These keywords and search items were selected because they link closely with the study's key research goal.

It was decided that studies published mainly since 1990 would be considered, as few major studies of links between teacher pedagogy and student outcomes within the context of writing had been published prior to 1990 (Hall & Harding, 2003). Hillocks' major study (1986) of the links between teachers' use of varying instructional modes when teaching writing and student effect-size growth is an exception to this.

This search generated more than 1,200 research documents for possible inclusion in the review. A close consideration of the title, abstract or introductory section of each document (in relation to the key research goal) led to an initial exclusion of the majority.

One hundred and eight were eventually considered more closely for possible inclusion in the review. Decisions about inclusion were made in relation to criteria discussed below. Most (*n* = 79) were from the United States while 13 were from the United Kingdom, 15 from New Zealand and one from Canada. They included most of the 10 studies of effective practice that were listed in **Chapter 1**. The exception was Grossman et al. (2013) as it was located a considerable time after the review was undertaken. Refer to **Appendix A** (on page 191) for a list of the 108 included documents.

However, a closer reading of each of the documents suggested that further screening was necessary if studies were to be included that linked directly and precisely to the key research goal. This meant re-reading and re-reflecting on the content of each document in relation to the following questions: Does the study focus primarily on what teachers do rather than on what learners do? Does it focus primarily or at least substantially on writing rather than reading? Does it focus primarily or at least substantially on Years 5 to 8 of schooling? Does it focus primarily on mainstream classrooms? Does it focus primarily on effective literacy teaching as a set of practices rather than just one selected aspect of pedagogy? Does it contain material that is not substantially evident in other studies by the same researchers? Does it appear to be a piece of investigative research rather than a collection of reflections? Has it been subject to a form of quality assurance, especially in terms of its methodology? Has it been constructed around participant numbers large enough to warrant some generalisations being made from its findings? If its participant numbers are small, is its theoretical foundation and methodology sound enough to warrant valid generalisations being made?

The screening process led to the selection of eight of the 108 studies for in-depth analysis: Gilbert & Graham, 2010; Graham & Perrin, 2007; Hall & Harding, 2003; Langer, 2001; Medwell et al., 1998; Parr & Limbrick, 2010; Pressley et al., 1997; Pressley et al., 1998. Five of the eight selected documents were from the United States, two from the United Kingdom and one from New Zealand.

Note that only three of the eight studies (Gilbert & Graham, 2010; Graham & Perin, 2007; Parr & Limbrick, 2010) focused exclusively on aspects of teachers' expertise in writing instruction. Note also that only five of the eight (Gilbert & Graham, 2010; Graham & Perin, 2007; Parr & Limbrick, 2010; Pressley et al., 1997; Pressley et al., 1998) focused exclusively on the Year 5 to 8 cohort or an equivalent of it.

Many of the 100 excluded documents were on the cusp of being included because of sound methodology and/or conclusions that matched those in most of the included documents. But generally they fell short of the inclusion criteria in one important area. For example, several authors described clearly their findings on "the expertise of literacy teachers" but focused primarily on teachers' expertise in teaching reading (for example, Block, Oakar, & Hurt, 2002; Rankin-Erickson & Pressley, 2000; Topping & Ferguson, 2005) or on teachers of younger primary age students (for example, Cutler & Graham, 2008; Flynn, 2007; Pressley et al., 1995; Wharton-McDonald, Pressley, & Hampston, 1998) or on teachers of secondary age students (for example, Hawthorne, 2007; Kiuhara, Graham, & Hawken, 2009; Parris & Block, 2007). Other authors who described clearly their findings on the expertise of literacy teachers did so broadly and did not focus precisely enough on teachers as "teachers of writing" (for example, Allington & Johnston, 2000; Taylor et al., 2000).

An issue arose during the screening or exclusion process as significant differences in methodology within the eight studies became evident. For example, four of the studies principally used qualitative research methods through use of observation and interview (Langer, 2001; Medwell et al., 1998; Parr & Limbrick, 2010; Pressley et al., 1998), two principally used quantitative research methods through use of teacher questionnaire or survey (Gilbert & Graham, 2010; Pressley et al., 1997), and two were meta-analyses or reviews of other research studies (Graham & Perin, 2007; Hall & Harding, 2003). The number of teacher participants in each document varied from 305 participants (Medwell et al., 1998) to six participants (Parr & Limbrick, 2010). Although teacher participants in most of the studies were selected through empirical student-achievement evidence and

recommended or confirmed for inclusion through "expert other" advice, teacher participants in one study (Gilbert & Graham, 2010) were selected randomly. Four of the qualitative studies (Langer, 2001; Medwell et al., 1998; Pressley et al., 1997; Pressley et al., 1998) formed comparisons between the practice of a group of exceptional teachers and a group of more typical teachers, whereas the other qualitative study focused on exceptional teachers only (Parr & Limbrick, 2010).

Hall (2002) states with respect to her systematic review of literacy research studies, "The fact that different research methods and different lenses have been used in research on literacy renders systematic reviewing an extremely complex task" (p. 45). It is therefore sometimes difficult to make some defensible generalisations across studies within a systematic review. This must be regarded as a limitation of the synthesising process in that dependability of and transferability between some of the studies must be questioned, mainly because of diverse participant selection and data-gathering strategies and limited participant numbers (Lincoln & Guba, 1985; Tashakkori & Teddlie, 1998).

However, despite these limitations, it is possible to identify some emerging themes or dimensions of effective practice across the studies, given that the principal focus of all eight is the instructional approaches and strategies that effective literacy teachers in middle schools seem to demonstrate, especially for writing.

Phase two of developing a conceptual framework involved identifying the broad themes or dimensions across the eight studies. For this, a process of content analysis and synthesis was undertaken. For each study, the research problem and questions, data collection and analysis procedures, and key findings were recorded, evaluated and compared with each other, according to established protocols for undertaking a systematic review of literature (Hall, 2002). Commonalities in key ideas, particularly from the key findings of each study, were sought. This process of content analysis and synthesis generated a coherent pattern of classifications (emerging dimensions), as well as some more detailed findings that constitute the broad outline of the conceptual framework that underpins this study.

2.2. What the literature says about the pedagogical actions of effective teachers of writing: An overview

The following is a literature-driven summary of the broad dimensions of effective literacy pedagogy (particularly writing) that teachers need to consider in order to generate higher than anticipated learner gains in writing. It has been synthesised from a close reading of the

set of eight aforementioned research studies. Note that the studies also explored aspects of teacher content and pedagogical knowledge (Medwell et al., 1998) and personal dispositions and professional aptitudes (Gilbert & Graham, 2010; Hall & Harding, 2003; Langer, 2001; Medwell et al., 1998) associated with effective literacy practice. But the focus of the current study, and consequently this synthesis, is the instructional strategies that effective teachers of writing utilise.

2.2.1. Provision of optimal support for learners

The studies indicate primarily that effective writing instruction is contingent upon teachers providing optimal support for diverse learners through strategic and judicious implementation of varied instructional and organisational actions. All report explicitly or implicitly that "effective teachers…have a wide and varied repertoire of teaching practices and approaches…and they can intelligently and skilfully blend them together in different combinations according to the needs of individual students" (Hall & Harding, 2003, p. 3).

The studies collectively suggest that providing optimal support for learners as developing writers requires teachers to *maintain and communicate high and sufficient expectations* for learner achievement. They also suggest that effective teachers of writing *develop and utilise learning goals* appropriate to learners' strengths and needs, and *plan and implement purposeful and authentic learning tasks* appropriate to learners' interests and needs.

Effective teachers of writing also *provide direct or explicit instruction* from time to time, often through scaffolding new learning tasks and utilising a strategically selected blend of demonstrating, questioning, prompting, probing and explaining in contextualised learning settings. They also *respond to learners' oral and written efforts* in ways that promote learner reflection and notions of change.

The studies also suggest that effective teachers of writing ensure that *learners are continually motivated, engaged and challenged* cognitively and emotionally in a range of literacy learning tasks and within a focused environment that encourages risk-taking. This involves promoting levels of engagement and challenge that do not lead to learner frustration.

These same effective teachers, according to the studies, *organise and manage their classrooms and programmes* in a way that learners' differentiated needs can be met

efficiently. This means utilising changing and strategic variations of whole class, small group and individualised instruction.

They also *promote self-regulatory learning habits* through the planned use of teacher actions designed to give learners a sense of ownership or responsibility around the challenge of becoming independent writers. This might, for example, involve the promotion of processes for planning, organising and completing writing tasks independently and for self-monitoring progress in relation to what a successful writer does.

As described, eight dimensions of effective pedagogy emerge from the synthesising process. It is necessary, however, to reiterate the warning given in **Chapter 1** about considering each of these dimensions as discrete components of effective literacy practice and apart from their teaching and learning contexts. Effective practice is complex and involves many teacher decisions about how it should be undertaken (Hammerness et al., 2005). As Hall & Harding (2003) state, "There simply is no one single critical variable that defines outstanding instruction" (p. 4). They suggest that effective instruction is "a complex interaction of many components, an intelligent weaving together" (p.42) of a wide variety of components which appear to be associated with successful teaching of writing. Parr & Limbrick (2010) add that "there is [a] risk that in deconstructing an activity like teaching, the true complexity of expert activity is oversimplified as well as the importance of context overlooked. Effective practice is not something absolute; it varies with context" (p. 583). Proficient implementation of each dimension is critical to generating higher than anticipated learning gains but only in strategic combination (to an unknown degree) with other dimensions.

However, most of the studies also conclude that it is still worthwhile exploring the essence of each dimension, especially in combination with other dimensions, because "we do not know what dose of each treatment is optimal, how these treatments are best combined, and what combination of treatments work best for which [learners]" (Graham & Perin, 2007, p. 328).

In order to add operational detail to each of the dimensions in useful depth, it is necessary to move beyond the content of the eight key studies and refer to other related studies that comment insightfully on them. This means not only referring to all studies considered for the initial synthesis of emerging dimensions (refer to **Appendix A**) but also to more focused or specialised studies of each dimension. This includes studies published prior to 1990.

What a wide range of researchers have explored around pedagogical ideas and issues relating to each of the dimensions (particularly within the context of instructional writing) is examined closely in the remainder of this chapter.

It is also necessary to undertake an in-depth review around each dimension so as to address the secondary research goal that underpins this study; namely, to make critical content and methodological links between the findings about effective writing instruction in this study and in other comparable studies.

2.3. Some pedagogical concepts that underpin effective implementation of dimensions of practice

Before examining pedagogical ideas and issues relating to each of the dimensions of practice, it will be useful to explore some pedagogical concepts that underpin effective implementation of the dimensions. This is because analysis of the eight key studies suggests that there is a set of pedagogical concepts that need to be in place if dimensions are to be implemented effectively. One concept relates to the need for teachers to establish and maintain a learning climate that features positive, close and caring learner-teacher relations if they are to generate higher than anticipated learner gains. Another relates to the need for teachers to understand the concept of scaffolding and the level of scaffolding required for learners to achieve and maintain mastery of a task. Many of the researchers referred to above (and others) allude to or discuss these pedagogical concepts, whether they relate to (for example) the expectations that teachers communicate to learners, the learning goals that they set for and with them, or the strategies they use to engage them in learning.

2.3.1. Teacher-learner relations

There is a range of research evidence that the nature and quality of teacher-learner relations, as demonstrated in instructional contexts, affect learner outcomes (academic and social) to varying degrees. Several studies indicate, in fact, that positive teacher-learner relations are closely associated with high literacy achievement (Birch & Ladd, 1997; Burchinal, Peisne-Feinberg, Pianta, & Howes, 2002; Hamre & Pianta, 2001).

When discussing the nature of the relationship between effective teachers and successful learners, the terms “positive”, “close” and “caring” often emerge. When learners perceive that their teacher holds a disposition that might be described as positive, close and caring, they are more likely to engage in learning tasks at a high level and are more inclined to achieve positive learning outcomes (Cornelius-White, 2007; Hamre & Pianta, 2001; Hughes

& Kwok, 2007). When teachers have positive and close relations with learners, they are more inclined to act in ways that promote student achievement, such as implementing deliberate and differentiated instruction (Pianta, 2001).

In one of their studies of effective literacy instruction, Pressley and colleagues point to effective literacy teachers as being "caring of learners", "interested in learners' lives", and "positive in their interactions with learners" (Pressley, Raphael, Gallagher, & DiBella, 2004). In another study, they describe how effective literacy teachers "connect with learners", "hold a genuine concern for learners" and "are consistently positive in their interactions with learners" (Raphael et al., 2008).

In her study of middle school students' perceptions of their teachers as "pedagogical carers", Wentzel (1997) reports what 248 students describe as the attributes of a caring teacher. The teacher "makes a special effort", "teaches in a special way", "makes the class interesting", "talks to me", "pays attention", "asks questions", "listens", "trusts me", "tells you the truth", "asks what's wrong", "talks to me about my problems", "acts as a friend", "asks if I need help", "takes time to make sure I understand", "calls on me", "checks work", "tells me when I'm doing a good job" and "praises me" (p. 416).

Within the New Zealand context, Bishop, Berryman, Cavanagh & Teddy's research (2007) on Te Kōtahitanga (an inquiry into engagement and achievement by Year 9–13 Māori learners) suggests that teachers who "build and nurture a supportive loving environment" (Te Manaakitanga), "create a secure and well-managed learning environment" (Te Whakapiringatanga) and "use a range of strategies that promote effective relationships with their learners" (Te Ako) contribute significantly to positive outcomes by learners.

There is, however, some variability about the level or degree of association that researchers suggest is needed for effective teacher-learner relations. Burchinal and colleagues (2002) suggest that learners whose parents are particularly authoritarian benefit most when positive teacher-learner relations are apparent in the classroom, and Lynch & Cicchetti (1997) believe that learner-learner or peer relations affect learner engagement and achievement more strongly than teacher-learner relations as students get older; that is, as they move from elementary or primary school to middle school.

2.3.2. Scaffolding

Researchers also note that the level and quality of scaffolding or planned assistance that teachers provide within instructional contexts affects learner outcomes. Effective scaffolding is, in fact, the basis of direct or explicit instruction that is effective (Hmelo-Silver, Duncan, & Chinn, 2007; Quintana et al., 2004).

The purpose of scaffolding, as an instructional process, is to make learning tasks more achievable and manageable for learners by decreasing the learner's cognitive load as s/he undertakes the task (Hmelo-Silver et al., 2007; Wood, Bruner, & Ross, 1976). This can be achieved by the teacher minimising obstacles, compensating for limitations, or providing assistance to learners at opportune moments during instruction (Quintana et al., 2004). Scaffolding enables learners to undertake and complete tasks successfully that might otherwise be beyond their current level of competency (Hmelo-Silver et al., 2007).

Effective scaffolding is most usefully provided by the teacher when it lies within a learner's zone of proximal development (Bodrova & Leong, 1998; Vygotsky, 1978). Without an appropriate level of scaffolding being offered within the zone of proximal development, task completion can become frustrating for the learner. This might be because they receive either insufficient or excessive scaffolding, depending on their current competency level.

Being effective at scaffolding involves the teacher applying a blend of strategic and iterative pedagogical actions to new learning situations (Benson, 1997; Bodrova & Leong, 1998; Hmelo-Silver et al., 2007; Quintana et al., 2004; Vanderburg, 2006; Wood et al., 1976). The studies cited refer to actions such as the teacher enlisting the learner's interest in the task through links to prior knowledge, simplifying the task by reducing the number of possible actions and/or undertaking some actions that might be deemed to be too challenging for the learner. Other actions might include the teacher sharing a structure with the learner for undertaking the task, ensuring that the learner is aware of the actions that are necessary for successful completion of the task, assisting the learner to undertake the most challenging actions of the task but in a way that does not build over-dependency on the teacher, articulating (by thinking aloud) what a successful learner does, and/or demonstrating a successful outcome of the task, actively or through models. Benson (1997) suggests that scaffolding, undertaken effectively by teachers, acts "as an enabler, not a disabler" (p. 126) for the learner.

The nature and level of scaffolding needed for successful completion of a task is dependent on two factors: the cognitive challenges inherent within the task, and the learner's current level of proficiency in relation to the task challenges (Benson, 1997; Englert, Raphael, Anderson, Anthony, & Stevens, 1991). This means that different learners (or groups of learners) can require different types and levels of scaffolding in order to undertake successfully the same or different tasks. Within the context of instructional writing, for example, a group of proficient writers might merely require access to a model of expected output (as an act of scaffolding) whereas a group of less proficient writers might require detailed modelling and explaining about how the text was crafted.

A number of research studies explore the links between scaffolding actions undertaken by teachers and learner outcomes in writing in some detail (Applebee & Langer, 1983; Bodrova & Leong, 1998; Read, 2010; Yarrow & Topping, 2001). Foremost amongst them is Vanderburg's research (2006) on the scaffolding actions that teachers need to undertake if learners are to become proficient writers. He points to many benefits for learners when the teacher makes strategic and purposeful scaffolding decisions in relation to learners' zones of proximal development; namely, that scaffolding strategically and purposefully evokes a greater understanding of the writing process amongst learners, a more intrinsic desire to produce text that is reader focused, and a deeper understanding of what is gained by writing. Scaffolding, in such instances, is often undertaken through teacher articulation of the "inner writing voice" (Vanderburg, 2006, p. 384) when demonstrating text formation to learners. He also indicates (as do Bodrova & Leong, 1998) that learners become more metacognitive about text formation as they move from dependence to independence as writers through gradual release of teacher scaffolding.

These two pedagogical concepts should be considered as conditions that underpin the key ideas and issues of effective practice that are discussed in the remainder of this chapter.

2.4. Teachers' instructional strategies

The following is a detailed synthesis of the key instructional strategies that appear to generate effective literacy practice within the context of writing. It is organised around the eight dimensions of effective practice that have been identified. It will constitute an idealisation of effective pedagogy against which the pedagogy of others (namely, the teachers in this study) can be described, discussed and compared.

2.4.1. Expectations

There is considerable research evidence that the expectations that teachers generate and communicate for learners' social, behavioural or academic achievement affect learner outcomes. Good & Brophy (1997) define teacher expectations as the "inferences that teachers make about the future behaviour or academic achievement of their students, based on what they know about these students now" (p. 79). Teachers can generate and communicate expectations for individual learners or for groups of learners. The discussion in this section frames the consideration of how teachers in this study generate and communicate expectations (particularly for achievement) to learners in their classrooms.

It is probable that the existence of teacher expectations for a particular learner's performance will increase the likelihood that the learner's performance will move in the direction expected and not in the opposite direction (Brophy, 1983). But it also possible that the existence of expectations for a learner's performance, especially if they are negative expectations, might generate a sense of "deficit theorising" and "inevitability" within the teacher (Rosenthal & Rubin, 1971; Taylor, 1970). Effective teachers monitor the expectations for achievement that they generate and communicate to learners.

Expectations for achievement can be generated from many sources. They link strongly to teachers' understandings about what learners *should* be achieving, as influenced by their professional beliefs about achievement (Good, 1987; Miller & Satchwell, 2006) and as signalled by directions contained in national and local curriculum statements (Timperley & Phillips, 2003).

However, the major source of achievement expectations is probably information that the teacher generates over time about a learner's personal characteristics (Brophy, 1983; Good, 1987). This can be generated by the teacher reflecting on (for example) the learner's gender, ethnicity, socio-economic status, physical appearance, classroom conduct, assessment information, or diagnostic or special education labels. Expectations can also be generated for cohorts of students as potential learners. Within the New Zealand context, St. George (1983) revealed that most teachers in her 1980s study perceived their Māori students more negatively than they perceived their Pākeha students and held lower expectations for their potential achievement. She linked these expectations to teachers' implied beliefs that their Māori students came from home backgrounds that were less conducive to academic learning

than their Pākeha students' homes and that their Māori students lacked interest in school-based learning more than did their other students.

Generating expectations does not, however, directly affect learner achievement. What is key are the pedagogical considerations and actions that teachers use to communicate these expectations (Brophy, 1983; Cooper & Good, 1983; Good & Brophy, 1997; Miller & Satchwell, 2006; Timperley & Phillips, 2003). Rubie-Davies (2010) refers to these considerations and actions as "discriminatory teacher behaviours… [associated with] high expectation and low expectation students" (p. 122).

Within the context of instructional writing, expectations can be communicated through the literacy learning goals that are established for learner achievement, the planning that is developed to address literacy learning goals, the tasks that are selected for learner engagement, the instructional strategies (verbal and non-verbal) that are used for programme implementation, and the way that the literacy learning environment is presented to learners (especially through the display of quality writing samples) (Brophy, 1983; Cooper & Tom, 1984; Timperley & Phillips, 2003). Timperley & Phillips (2003) suggest that teachers' expectations for learner achievement actually "shape their daily classroom decisions and actions" (p. 628).

In their discussion of effective practice, Cooper & Tom (1984) operationalise many of these notions within the parameters of an instructional writing lesson. They suggest that learners for whom teachers hold high achievement expectations might receive:

> More smiles, head nods, forward body lean, eye contact and friendliness than low expectation students… [They might] receive more opportunities to learn new material [and] more difficult material than low expectation students…[They might] receive more clue giving, repetition [and] rephrasing than low expectation students…[They might be]... called on more frequently than low expectation students…[and they might] receive more praise... [and] less criticism. (p. 81).

Teachers who hold similar and generally high achievement expectations for most learners in their class tend to stress mastery goals with them more than teachers who hold widely varying and often low expectations for learner achievement. In addition, they tend to establish more positive relationships with learners, develop more challenging learning tasks, use instructional strategies that lead to greater independence, employ mixed-ability and

interest-based groupings more widely, and promote the notion of peer support more in their classrooms. Above all, they tend to believe more strongly than other teachers that all learners can achieve if they receive appropriate support from the teacher (Delpit, 1995; Weinstein, 2002; Weinstein & Middlestadt, 1979; Weinstein, Marshall, Brattesani, & Middlestadt, 1982).

A number of researchers have commented, however, that the issue of teachers generating and communicating inappropriate expectations for learner achievement has been sometimes over-emphasised and over-estimated by some researchers (Brophy, 1983; Good, 1987). Good (1987) suggests that most teachers hold accurate expectations about their students and can readily change their expectations as new information emerges (p. 34).

Miller & Satchwell (2006) represent the viewpoint of many when they conclude that research gathered over the past 40 years indicates that "high teacher expectations produce positive impact on…student achievement, but low expectations produce negative impact" (p. 137). Teachers who generate appropriate expectations for learner achievement in writing, and communicate them principally through use of appropriate pedagogical actions during instruction, can affect learner outcomes positively, both over time and for particular lessons, and especially at the class level.

It is hypothesised that teachers in this study (as a cohort of exceptional practitioners) will have generated high achievement expectations for their students and will communicate these expectations clearly. This will require some inferences to be drawn, as expectations are often implied rather than stated. But it will be useful to ascertain how important the dimension of "expectations" (as a dimension of effective practice) is to this cohort of exceptional teachers because of the reported disagreement between some researchers on this dimension's level of importance. It will also be useful to determine what has influenced teacher participants' expectations and how they communicate them clearly.

2.4.2. Goal orientation

There is considerable research evidence that the content and intensity of classroom goal orientation can affect learner outcomes. This includes both the goals that teachers set for and with learners and the goals that learners set for themselves (Ames & Archer, 1988; Black & Wiliam, 1998; Covington, 2000; Heath, Larrick, & Wu, 1999; Latham & Locke, 1991; Locke, Latham, & Erez, 1988; Schunk, 1996, 2001; Seijts, Latham, Tasa, & Latham, 2004). Successful learners are clear about the knowledge, behaviour, skill or strategy they need to

master in order to make progress and achieve success, whether for a particular task or for a series of tasks. This information can be communicated clearly through the goals that teachers set for and with them (Schunk, 2001).

This section of the review focuses on the types of goals that teachers develop and utilise in teaching and learning interactions, the key properties of effective learning goals, and how teachers develop and utilise them within instructional writing contexts. This discussion frames the consideration of how teachers in this study develop and utilise learning goals in relation to generating higher than anticipated learner gains.

There are two main types of learning goals. Some researchers refer to them as mastery-oriented goals contrasted with ability-oriented goals (Ames & Ames, 1984), some as task-oriented goals contrasted with ego-oriented goals (Maehr, 1984) and some as learning-oriented goals contrasted with performance-oriented goals (Dweck, 1986; Timperley & Parr, 2009). A learning-oriented goal is a goal that relates to the processes used for solving a problem (such as mastering strategies for crafting or re-crafting texts), whereas a performance-oriented goal relates merely to the outcome of the problem-solving activity (such as ways of achieving a higher grade for a particular text) (Schunk, 1996).

Researchers who make conclusions about the effectiveness of one type of learning goal over another generally conclude that an emphasis on process appears to benefit learners more than an emphasis on performance (Ames & Archer, 1988; Covington, 2000; Schunk, 1996; Seijts et al., 2004). Achieving any goals that have been carefully and thoughtfully established will benefit learners—especially by enhancing their motivation and self-efficacy (Covington, 2000)—but focusing on process-oriented goals appears to benefit learners more. There is evidence, for example, that learners who focus primarily on process achieve higher levels of motivation and learning outcomes than the levels achieved by those who focus primarily on performance (Schunk & Swartz, 1993). There is also evidence that they use more effective problem-solving strategies and prefer more cognitively challenging tasks (Ames & Archer, 1988). Focusing on process also assists learners to become more self-evaluative (Latham & Locke, 1991; Schunk, 1996). There appear, however, to be some benefits for learners when they focus on performance while undertaking learning tasks, in that they can achieve high levels of engagement, self-efficacy and motivation—but more so if they reflect as well on the processes that underpin the performance (Covington, 2000). Covington (2000) suggests that focusing on performance rather than process encourages

learners to “outperform others as a means to aggrandize one’s ability status at the expense of peers” (p. 174).

A teacher’s emphasis on a particular type of goal is generally influenced by his or her beliefs about learner cognition and motivation (Locke et al., 1988; Seijts et al., 2004; Tubbs, 1986). If, for example, a teacher believes that a learner’s pathway toward higher motivation lies principally in extrinsic rewards (including higher attainment in writing than the learner’s peers), s/he is more likely to focus on performance-oriented goals (Locke et al., 1988). If a teacher believes that the most important outcome of instruction is the promotion of self-regulation, s/he is more likely to focus on process as s/he leads learners toward independence (Latham & Locke, 1991; Schunk, 1996).

There is a range of goal properties that appear to be particularly significant in affecting learner outcomes. Specificity, proximity, involvedness, degree of challenge, differentiation, and linking with assessment appear to be critical properties of effective goal orientation. All can be promoted by the teacher.

Goals incorporating specific and measurable learning directions are more likely to affect learner outcomes than general goals such as, “Do your best” (Locke & Latham, 1990). This is because more specific goals (directed at mastering particular writing strategies) focus learner attention more by specifying with some exactitude the amount and type of effort required for success. They make progress measurement easier to gauge than do general goals (Timperley & Parr, 2009).

The notion of proximity is closely linked to specificity. Proximal or short-term goals (such as “being able to re-organise a particular text so that the main content points become evident through paragraphing”) are more effective than distant or long-term goals (such as “being better at paragraphing”) (Locke & Latham, 1990). Because proximal goals are usually achieved more quickly than more distant goals are achieved, they result in higher motivation and greater self-efficacy for learners than do more distant goals. It is easier for learners to self-evaluate their progress in relation to short-term rather than long-term goals (Locke & Latham, 1990). However, distant goals can be sub-divided into more manageable entities which allows for long-term progress to be monitored clearly and frequently (Bandura & Schunk, 1981).

It is also important that learners have some participation in the formation of learning goals for particular tasks (Ames & Archer, 1988; Schunk, 1990). This not only builds the learner's motivation and engagement in the task, but also helps him or her clarify what has to be undertaken to be successful at the task. Operationally, this might require the teacher to inquire of students, "What might we have to be able to do well as writers to be successful at this task?" Fostering a sense of learner involvedness in goal formation also helps learners to become more self-regulated as they assume greater responsibility for text crafting and re-crafting (Latham & Locke, 1991; Schunk, 1996).

Learners also need to sense an appropriate degree of challenge in learning goals (Locke & Latham, 1990; Schunk, 1995). They will not be motivated to strive for overly easy goals, nor will they be motivated to attempt what they believe are near impossible goals. Assuming that learners have the requisite proficiencies to undertake a particular writing task, goals that contain a moderate degree of challenge seem to have the greatest impact on learner motivation and achievement. This is especially the case if learners are given direct goal attainment information such as criteria for success (Schunk, 1990).

As different learners can be exposed to different levels of challenge (according to their zones of proximal development), goals need to be differentiated in relation to learners' strengths and needs as developing writers (Dweck, 1986).

There are also strong links between goal orientation and assessment. This is manifested through the feedback that learners receive in relation to learning goals that have been set (Black & Wiliam, 1998; Earley, Northcraft, Lee, & Lituchy, 1990). Effective goal-related feedback assists and motivates learners to form and utilise new goals that emanate from the specific feedback points received and accepted. This is particularly the case if the learning goals are more process than performance oriented (Earley et al., 1990). As learners develop a sense of goal attainment, they move toward forming new, challenging goals (Schunk, 2001).

It is hypothesised that teachers in this study will develop and utilise a range of learning goals in their teaching and learning interactions with learners in diverse ways. But it will be useful to note how important the dimension of "learning goals" is to this cohort of exceptional teachers, as much of the literature on formative assessment (for example, Black & Wiliam 1998; Sadler, 1989) appears to place learning goals at the forefront of effective pedagogy. It will also be useful to ascertain what learning goals look like and how they are

actually used as a pedagogical tool. This will mean examining the properties of learning goals used by teachers in this study in relation to what the research literature outlines.

2.4.3. Task orientation

Researchers who explore notions of goal orientation often also note that the nature and level of task orientation that teachers utilise affects learner outcomes. Task orientation can also enhance engagement in learning (Ames, 1992; Black & Wiliam, 1998; Blumenfeld, 1992). It refers to the attention that teachers or learners give to the content and organisation of activities that learners undertake in order to address learning goals that are explicitly or implicitly understood (Bossert, 1979). The discussion about task orientation in this section of the study anticipates a comparative discussion of the content and organisation of learning tasks that teacher participants in the study develop and utilise with learners.

Tasks have been described as "the basic instructional unit in classrooms" (Lodewyk & Winne, 2005, p. 3). They can be learner- or teacher-generated. Within the context of instructional writing, they can be single writing tasks for all learners or multiple writing tasks for learners to select from; they can be worked on by learners at varying times or simultaneously; they can be designed to generate one intended outcome or a range of possible outcomes; they can be designed to be cooperative or interactive writing tasks or tasks for single learners; and involvement in them can be self-selected or teacher-directed. Self-selected writing tasks are often guided by learner interest in the proposed topic or by perceptions of the degree of skill proficiency that learners hold.

There are four properties of task orientation that appear to connect tasks with enhanced learner engagement and outcomes; namely, that the task is meaningful to the learner, that it links to goal orientation, that learners undertake a variety and diversity of tasks, and that there is an appropriate level of challenge within tasks. Each of these four properties will be discussed in anticipation of ascertaining what level of importance can be attributed to each of them in this study.

The degree of meaningfulness that learners perceive to be in a task appears to affect learner engagement and outcomes to a considerable extent (Ames, 1992; Blumenfeld, 1992; Lodewyk & Winne, 2005; Lodewyk, Winne, & Jamieson-Noel, 2009; Paris & Winograd, 1990; Wigfield & Eccles, 1992). For the task to be meaningful, learners need to demonstrate interest in its content, be involved in its selection and value the learning that is inherent within the task. Tasks are meaningful to learners if they link to their current or prior

interests, experiences or knowledge; if they make cognitive sense to learners; or if they understand the potential of the task for their ongoing cognitive development (Lodewyk & Winne, 2005; Wigfield & Eccles, 1992). This might involve learners self-selecting tasks or at least having some control over their selection (Ames, 1992; Catlin, Lewan, & Perignon, 1999; Nicholls, 1984; Sullivan, 2008). Paris & Winograd (1990) suggest that when learners focus on a task that is meaningful to them and value the learning within that task, they are more likely to feel "empowered" as developing learners.

For writing tasks in particular to be meaningful to learners, several researchers indicate that task content should primarily (but not exclusively) link to learners' own lives (especially their experiences and interests) and to the cross-curricular learning that they are undertaking (Atwell, 1987; Calkins, 1994; Graves, 1983, 1994). They suggest that the primary purpose of writing instruction is to help writers make sense of their lives and learning. As Calkins (1994) states, "Writing does not begin with deskwork but with lifework....[It] allows us to hold our life in our hands and make something of it" (pp. 3–4). These beliefs impact strongly on teachers' selection of writing tasks and topics for learners.

Learning tasks that are effective also link closely to any learning goals that have been established so as to enable learner progress to be noted by both teachers and learners with some exactitude (Black & Wiliam, 1998; Lodewyk et al., 2009). Writing tasks need to be designed and implemented in a way that enables teachers and learners to ascertain clearly the degree of goal-oriented progress being made. Black & Wiliam (1998) suggest that as learners are working toward particular learning goals, their progress "can only be generated with tasks that both work to those goals and that are open in their structure to the generation and display of relevant evidence, both from student to teacher and to students themselves" (p. 31).

In addition, learners need to undertake a variety and diversity of learning tasks if they are to make expected progress. Within the context of instructional writing, undertaking a variety and diversity of tasks heightens the possibility of learners demonstrating their ability across several learning areas and lessens the possibility of learners comparing achievement with each other (Marshall & Weinstein, 1984). It also assists learners to facilitate a greater interest in learning and a stronger mastery orientation (Ames, 1992).

Problems can, in fact, emerge if tasks are not selected, planned and organised strategically and thoughtfully. Blumenfeld (1992) suggests that too much variety can detract from

learners' focusing on the deep learning that is intended to sit behind tasks. It might dilute the intensity of the learning goal that has been developed. Unless tasks are designed carefully, diversity can lift interest and attention in task content, but sometimes at the expense of cognitive engagement.

The level of challenge inherent within learning tasks also affects learner engagement and outcomes, but to varying degrees. For most learners, success is generated when they perceive tasks to be not only challenging but also cognitively manageable (Blumenfeld, 1992). This means that tasks need to be within the learner's zone of proximal development if they are to be undertaken successfully (Vygotsky, 1978). Being successful at completing challenging but manageable tasks increases learners' self-efficacy, motivation and capacity to cope with mildly stressful learning situations (Perry, Phillips, & Dowler, 2004; Rohrkemper & Corno, 1988).

However, learners' beliefs about what constitutes "reasonable effort and appropriate challenge" may vary, causing some learners to accept task challenges that others may resist. Resistance is often due to learners' perception of their cognitive capacity, or to the source of challenge that they perceive to be within the task (Blumenfeld, 1990). Within the context of instructional writing, the challenge may lie (for example) in the content, form or organisation of the task. If learners hold differing beliefs about the concept of "reasonable effort and appropriate challenge", then planning, organisational and management implications are created for teachers (Blumenfeld, 1992).

Given that much of the research literature on engagement and challenge (neatly summarised in Gibbs & Poskitt, 2010) actually promotes "task orientation" as a critical means of engaging and challenging learners, it is predicted that the exceptional cohort of teachers in this study will show themselves to be very proficient at the operational aspects of this dimension. It will be useful to explore how important proficiency in this dimension is for generating higher than anticipated learner gains in writing.

2.4.4. Direct instruction

There is considerable research evidence that the quality and degree of direct instruction (as opposed to implicit instruction) that teachers provide for diverse learners affects learner outcomes (Cazden, 1993; De La Paz & Graham, 2002; Fidalgo, Torrance, & Garcia, 2008; Grossman et al., 2013; Hmelo-Silver et al., 2007; Kirschner, Sweller, & Clark, 2006; Knudson, 1990; Purcell-Gates, Duke, & Martineau, 2007; Sweller, Kirschner, & Clark,

2007; Williams & Colomb, 1993). Grossman and colleagues (2013) conclude that, "Explicit Strategy Instruction is the dominant dimension that differentiates between high-quartile and low-quartile teachers" (p. 459) in relation to student achievement.

However, there is significant debate about the degree of direct instruction that is necessary for success by learners and the nature of the direct instruction that is effective. It is anticipated that the results of this study will contribute useful evidence to this debate, especially on what constitutes direct instruction that is effective.

For the purpose of this study, direct instruction is defined as the act of "providing information that fully explains the concepts and procedures that students are required to learn as well as learning strategy support that is compatible with human cognitive architecture" (Kirschner et al., 2006, p. 75). The aim of direct instruction is to provide learners with specific guidance about how to "cognitively manipulate information in ways that are consistent with a learning goal, and store the result in long term memory" (p. 77). Direct instruction involves teachers utilising a range of instructional strategies (such as demonstrating, questioning, prompting and explaining) that lead learners toward knowledge and skill construction (Hmelo-Silver, 2007). Cazden (1993) suggests that direct instruction (which she refers to as "explicit teaching") mainly involves the teacher moving between "revealing" and "telling".

In relation to the instructional writing context, direct instruction means that teachers construct (and apply) declarative and procedural knowledge with learners about "what effective writers do". It is best provided on a "just-in-time" (rather than "just-in-case") basis because knowledge is most meaningful when applied directly or immediately to a problem-solving or investigational situation (Freedman, 1993; Hmelo-Silver, 2007; Purcell-Gates et al., 2007). This means, for example, teaching a point of grammar through collaborative sentence formation for an authentic purpose rather than as an isolated exercise that learners are expected to apply independently on a later occasion.

As mentioned previously, the concept of direct instruction is closely linked to the concept of scaffolding. This is because building effective scaffolds with learners generally requires teachers to utilise direct instruction carefully and strategically (Hmelo-Silver et al., 2007; Quintana et al., 2004; Wood et al., 1976). Refer to the discussion of "scaffolding" on pages 20 to 21 for details of these links.

There are three major properties of direct instruction that appear to impact directly on learner outcomes: the modes of direct instruction that effective teachers employ, the classroom discourse that teachers utilise when applying the modes of instruction, and the level or degree of direct instruction needed for effective learning. Each of these three properties will be discussed in some depth as it is anticipated that the cohort of exceptional teachers in this study will provide evidence of how they are demonstrated within diverse contexts.

2.4.4.1. Modes of direct instruction

There are two principal modes of direct instruction that appear to generate learner gains in writing: strategy instruction, which involves teachers working collaboratively with learners as they learn about writing strategies through text construction, and product-oriented instruction, which involves teachers providing learners with literacy models or samples of expected attainment for analysis (Hillocks, 1984; Hillocks, 1986; Scardamalia & Bereiter, 1986). Other modes include procedural facilitation, which involves teachers providing external supports (such as text construction templates) for learners, and inquiry learning, which involves teachers prompting learners through guided discovery. All (but particularly the first two modes) are utilised by teachers to make the processes for constructing texts visible to students (Englert et al., 1991).

The first of these modes (teachers working collaboratively with learners as they learn through text construction) generally involves teachers demonstrating or making visible "the normally invisible cognitive processes related to planning, drafting and revising text" (Englert et al., 1991, p. 339). Some researchers (for example, Schunk, 2003) refer to this as "modelling". As an interactive mode, it involves teachers questioning, prompting, responding, explaining and telling. But, most significantly, it involves their demonstrating how they utilise the inner dialogue they hold with themselves when problem-solving during writing (Schunk, 2003). This often means the teachers "thinking aloud" while demonstrating a set of actions required for text construction. As suggested by Cremin & Baker (2010), demonstrating such actions during text construction positions teachers either as "writer-teachers" or "teacher-writers" (depending on whether the writing primarily has a personal or pedagogical intent) and indicates their authorial agency to learners.

The second mode (teachers providing learners with literacy models or samples of expected attainment for analysis) involves learners reflecting on a text model, coding and retaining

the information within the model, being capable of producing a version of it, and being motivated to produce it (Schunk, 2003). This mode can be undertaken by learners independently, collaboratively with other learners or with direct teacher assistance. If undertaken with teacher assistance, delivery of it involves the teacher questioning, prompting, responding, explaining and telling. It may also involve some use of teacher "think alouds" if the teacher wants to communicate through the model how he or she makes meaning of text construction.

There is, however, considerable debate and contradiction amongst researchers about the particular effectiveness of each of these modes in relation to learning gains. Most argue strongly for instruction that involves some active or direct form of demonstrating. Some suggest that effective usage of this mode (demonstrating combined with teacher "think alouds") enables learners to observe, listen to and reflect on the actions of expert others (usually the teacher) in order to acquire the knowledge, understandings and skills that are needed to be self-regulating as efficient writers (Englert et al., 1991; Schunk, 2003). Other researchers conclude that effective usage of this mode generates higher quality writing from learners, a greater ability to transfer writing skills from one text-type to another, a heightened sensitivity to the writer's audience, and a growing awareness of what it means to be a strategic learner (Block & Israel, 2004; Regan & Berkeley, 2012).

Smagorinsky (1992), in his support of teachers writing collaboratively with learners, argues that the second mode (the sharing of literacy models as a discrete instructional mode) does little to generate learner gains. He suggests that use of "sharing" as an instructional mode requires the addition of more active modes (such as teacher-learner collaboration on text compositions) if it is to promote involvedness and generate learning gains.

Other researchers (Aulls, 2002; Fidalgo et al., 2008; Regan & Berkeley, 2012; Schunk & Zimmerman, 2007) also argue for instruction that involves some active or direct form of demonstrating. As a representative example, Aulls (2002) suggests that teachers most effectively instruct learners by "[utilising] modelling procedures...showing students...and promoting collaborative dialogue" (p. 533).

On the other hand, some researchers argue for instruction that involves a more receptive approach for learners. Knudson (1990), for example, concludes from her instructional writing research that the most effective instructional approach is sharing literacy models with learners. Stolarek (1994) argues that sharing literacy models (what she refers to as

"prose modelling") not only generates learner gains in writing but also builds learners' metacognitive awareness of what they do as writers, especially when the models are analysed and explicated with learners. Geier, Blumenfeld, Marx, Krajcik, Fishman, & Soloway (2008) suggest that observed gains occur up to a year and a half after learners' participation in inquiry-based instruction that is teacher guided but not directed.

There appears to be some research consensus, however, that the degree of effectiveness of particular modes is contingent on the purpose for writing being instructed through the mode. Knudson (1990) notes that her conclusions about the importance of sharing literacy models with learners apply particularly to informational rather than expressive writing. Purcell-Gates and colleagues (2007) support this finding by suggesting that the explicit structural rules that guide procedural writing are better taught within the context of "worked examples" than are the "rules" for other types of writing.

It will be useful, within this study of the practice of a cohort of exceptional teachers, to examine whether one instructional mode proves itself to be more strongly connected to learning gains in writing than the other. It is anticipated that analysed results will add significantly to current research arguments on the effective usage of instructional modes within a writing programme.

2.4.4.2. Teacher discourse

The demonstrating of writing processes is only meaningful for learners if matched by learning-oriented conversations that generate metacognition (Dyson & Freedman, 2003; Langer, 2001). This necessitates the usage of high quality teacher-student discourse within instructional writing contexts. Effective teachers of writing recognise that their discourse with learners acts as both a text generative tool and a cognitive learning tool. They recognise that what is articulated through discourse can be internalised to guide learner knowing and thinking (McCarthey, 1994).

Within the domain of instructional writing, rich questioning and responding is particularly critical (Dyson, 2002; McCarthey, 1994; Nystrand, Gamoran, & Carbonaro, 1998; Nystrand, Wu, Gamoran, Zeiser, & Long, 2001). Cotton (1988), in her research on classroom questioning, defines a question as:

> Any sentence which has an interrogative form or function. In classroom settings, questions are defined as instructional cues or stimuli that convey to students the

content elements to be learned and directions for what they are to do and how they are to do it (p. 1).

Researchers (such as those cited above) identify diverse reasons for asking questions. Beside questions which require literal recall, classroom questions are principally asked to promote speculative, inferential and evaluative thinking by learners (Cotton, 1988). Questions can, in fact, be categorised into low, medium and high demand questions, with the level of demand based on the level of cognitive challenge and complexity contained within the question (Bloom, 1956; Stronge, Ward, & Grant, 2011).

With particular regard to helping learners understand and generate quality written texts, researchers identify three types of questions that are especially useful (Dickman, 2009; Nystrand et al., 2001; Wiggins & McTighe, 2001). They are questions which are "authentic", in that they do not require a pre-determined response and enable learners to think openly about writing and what writers do; questions which are "interactive", in that they incorporate learner responses about writing and what writers do from previous questions; and questions which encourage deep metacognitive thinking about writing issues and require learners to ask their own questions about their capacity as writers. Questions about understanding and composing texts need to generate at least partial if not full ownership by learners of both the content and construction of classroom texts.

It is hypothesised (because of the exceptional nature of the teacher participant cohort) that there will be strong links between high quality teacher discourse (particularly questions that challenge learner cognition) and higher than anticipated learning gains, but this will be checked through analysis of teaching and learning episodes.

2.4.4.3. Level of direct instruction

Despite researcher agreement on the power of direct instruction as an instructional mode, there is considerable debate about the degree of direct instruction needed to make expected progress. Some researchers argue for maximal guidance (for example, De La Paz & Graham, 2002; Kirschner et al., 2006; Sweller et al., 2007; Williams & Colomb, 1993), and some for more minimal guidance (for example, Freedman, 1993; Hmelo-Silver et al., 2007; Knudson, 1989, 1990).

Maximal guidance can be provided by teachers developing fully worked-out examples of texts with learners and collaboratively identifying the steps needed for successful

implementation of the example (Sweller et al., 2007). Those who argue for this type of guidance proffer several points of support for their position. De La Paz & Graham (2002), for example, conclude that learners who are exposed to maximal guidance produce texts that are "longer, contain more mature vocabulary and [are] qualitatively better" (p. 687) than do learners who are exposed to minimal guidance. They indicate that these gains are evident in both the short and long term.

Others argue that maximal guidance is a powerful means of developing creativity within learners. It provides a scaffold on which they can build their independent outputs (Bransford et al., 2005). Maximal guidance can indeed lessen the cognitive load on learners as they focus on generating content and developing creativity rather than concerning themselves with (for example) organisational rules for text development (Sweller et al., 2007). As such, it is a means of empowering students as writers by enabling them to promote and celebrate their individuality (Williams & Colomb, 1993). Williams & Colomb (1993) argue, in fact, that direct instruction may be "a necessary step in the process of empowering students to choose how they participate in the communities they encounter and to what degree they will let that participation define who and what they are" (p. 262).

Those who argue for more minimal guidance (such as Hmelo-Silver et al. in their 2007 rebuttal of Kirschner and colleagues' 2006 findings) suggest that enabling learners to be more instructionally guided than directed fosters stronger learner engagement in learning tasks, a higher mastery of goal orientation, more opportunities for learners to collaborate with others, a stronger capacity to transfer acquired knowledge and skills from one context to another, and indeed greater learning gains over time.

Freedman (1993), in her report on genre-based teaching, actually concludes that excessive levels of direct instruction "may be dangerous" (p. 245). She suggests that this is so if the teacher does not hold clear and sound knowledge of the concept, strategy or skill being taught, if the learner's zone of proximal development is not close enough to what is being taught, or if the instructional context is too distant from immediate application of the concept, strategy or skill.

No research literature explored during this study actually excludes direct instruction as a pedagogical tool. The arguments for and against direct instruction relate merely to the nature of instruction and the amount of direction or guidance required for building positive outcomes for learners. This appears to be mainly contingent on the operational and

cognitive challenges contained within a task, and the learners' current levels of proficiency (Hmelo-Silver et al., 2007; Kirschner et al., 2006; Sweller et al., 2007). These arguments will be checked through the results on "direct instruction" that emerge from the exceptional teachers in this study. Given the diversity of views by researchers, it will be useful to contribute further research information on the nature and degree of direct instruction needed to generate higher than anticipated learner gains in writing.

2.4.5. Responding to students

Responding to students, especially about their written texts, appears to be functionally analogous to "giving feedback" as an instructional strategy. For the purpose of this study, it is defined as the act of sharing or providing "information about how the student's present state (of learning and performance) relates to [previously identified] goals and standards" (Nicol & Macfarlane-Dick, 2006, p. 200). This is principally but not exclusively information that helps the teacher and the learner take action to reduce the discrepancy between the learner's intentions and the resulting outputs. As such, it is an integral part of the formative assessment process (Black & Wiliam, 1998; Parr & Timperley, 2010; Sadler 1989).

Feedback can be generated by the learner individually, by the learner in collaboration with an external source (such as a teacher or peers), or by the external source alone (Black & Wiliam, 1998; Nicol & Macfarlane-Dick, 2006). Feedback generated mainly by the learner is discussed in the section on Self-regulation. This section of the study focuses on feedback that is generated by the teacher, but sometimes in collaboration with the learner. It is intended to frame the discussion of how the cohort of exceptional teachers in this study respond to students about their writing so as to generate superior learner gains.

Effective feedback within the instructional writing context can be operationalised in a range of ways. It can either be provided verbally or in writing, and it is often supported by examples of achievement (models or exemplars) as points of reference. Teachers usually utilise a blend of oral and written responses as they discuss and analyse text-based processes and features with learners. It can be shared with individual learners or with groups of learners (Hattie & Timperley, 2007).

Feedback has several functions. It can have a motivational function whereby it is used to encourage or increase a desired general behaviour amongst learners, a reinforcement function whereby it is used to reward or punish a range of particular behaviours amongst

learners, or an informational function whereby it is used to describe information to learners about what they have achieved or what changes they can make to their performance (Guenette, 2007; Nelson & Schunn, 2009; Tunstall & Gipps, 1996).

Within the context of instructional writing, feedback with an informational function (arguably the most important function of feedback) can focus either on a task or product being generated by a learner (such as a planned, crafted, re-crafted or published text) or on the process being employed by the learner (as he or she plans, crafts, re-crafts and publishes the text). As such, it can lead to the improvement of a particular text, or greater writing proficiency by the learner through identification (and application) of a "next learning step". Ultimately, feedback with an informational function is designed to lead learners toward feeling more confident and independent about utilising text composition strategies as they note problem-solving mechanisms and as they integrate them into their text composition processes (Black & Wiliam, 1998; Hattie & Timperley, 2007; Parr & Timperley, 2010; Sadler, 1989; Tunstall & Gipps, 1996).

For the informational function to be utilised effectively, teachers need to undertake a complex assessment process (Sadler, 1989). Within an instructional writing context, this primarily involves teachers understanding what quality performance and outputs in writing look like. This helps them to build criteria for success so that they can ascertain the extent to which performance and outputs actually meet expected notions of quality, diagnose why any gap between expectations and performance or outputs is apparent, and articulate (verbally or in writing) what the writer needs to do to address any gap (Black & Wiliam, 1998; Hattie & Timperley, 2007; Kluger & DeNisi, 1996; Parr & Timperley, 2010; Sadler, 1989). This needs to be done in a timely manner, and in a way that is relevant and easily accessible to learners and that encourages them to reflect closely on both the particular output they are generating and their overall proficiency as a developing writer (Hattie & Timperley, 2007; Nelson & Schunn, 2009; Nicol & Macfarlane-Dick, 2006; Sadler, 1989). For this to happen satisfactorily, the teacher may need to explain how and why (for example) text alterations need to be made and the impact of possible alterations on learning outcomes (Bitchener, Young, & Cameron, 2005; Chi, Bassock, Lewis, Reimann, & Glaser, 1989). As Nelson & Schunn (2009) note, "Feedback without explanations can improve performance, but not learning" (p. 376). Explanations need to be direct, specific and easily understood by learners. But they also need to be given in a way that shows respect for the effort that the learner has made.

In addition, effective teachers ensure that diagnosis of the gap between expected and actual performance by students (as a component of generating feedback) leads to teacher reflection about the pedagogical practices required for generating more positive student outcomes. This generally leads to some re-shaping of pedagogical practices used by the teacher (Black, Harrison, Lee, Marshall, & Wiliam, 2003; Black & Wiliam, 1998; Yorke, 2003). As Yorke (2003) notes, "The act of assessing has an effect on the assessor as well as the [learner]. Assessors learn about the extent to which [learners] have developed expertise and can tailor their teaching accordingly" (p. 482).

Not all feedback, however, is deemed to be useful to learners (Parr & Timperley, 2010). The level of usefulness appears to be dependent on the nature of the feedback. For example, there is little evidence that outcome-focused feedback (such as providing a score or grade to a text) advances learning about text development and formation. There is evidence that feedback which focuses more on the personal rather than cognitive qualities of the writer (with comments such as "Good boy, you've done well") shifts the feedback focus from instructional to social goals (Kluger & DeNisi, 1998). In addition, feedback which is not transformative in nature (in that it does not suggest specific changes) does not generate student actions or learning sufficiently (Huot, 2002), and feedback which focuses excessively on surface features of writing does not encourage deep thinking about writing content, construction or organisation (Balzer, Doherty, & O'Connor, 1989).

It is hypothesised that the cohort of exceptional teachers in this study will form, deliver and use feedback at a high level, but it will be useful to note (and compare) the actual features of effective feedback that they demonstrate with the features reported by the research literature to be effective, and to ascertain what feedback looks like in actual learning interactions related to writing. It is predicted (because of their status as exceptional teachers) that most feedback they give will principally have an informational rather than a performance function.

2.4.6. Learner engagement and challenge

In a diverse range of studies, researchers conclude that the appropriate degree of learner engagement and challenge is also critical in generating positive learner outcomes (Akey, 2006; Fredericks, Blumenfeld, & Paris, 2004; Gibbs & Poskitt, 2010; Joselowsky, 2007). Learners who are fully engaged and challenged are more likely to remain focused on a task

until it is completed, hold strong personal agency over their learning efforts and generate an output that is fully commensurate with teacher and learner expectations (Joselowsky, 2007).

Learners, however, move between levels of engagement as they experience diverse teaching and learning contexts (Bong, 2004). Movement can be influenced by both internal factors (such as motivation and interest in a topic or task, and feelings of self-efficacy about their capability) and external factors (such as the nature of the teaching they experience) (Fredericks et al., 2004). This might mean, for example, learners experiencing different levels of engagement for different writing tasks, based mainly on their perception of the nature or content of the task and the degree of expertise that they bring to its text formation challenges. Learning experiences or contexts that engage some learners might not necessarily engage others, depending on their academic disposition, sense of self-efficacy, relationships with others in the learning context, sense of goal orientation, interest in the topic, motivation for learning, and capacity to be self-regulated (Fredericks et al., 2004; Martin, 2007).

Researchers suggest that there are three types of classroom-based engagement: behavioural engagement (compliance with school expectations and rules), emotional engagement (positive and mutually respectful relationships with others in the learning context) and cognitive engagement (learner commitment to the task) (Gibbs & Poskitt, 2010; Newmann & Wehlage, 1993; Patrick, Ryan, & Kaplan, 2007; Tyler & Boelter, 2008). All three types are important, but cognitive engagement is generally contingent upon the presence of the others (Gibbs & Poskitt, 2010).

Several researchers also argue for a strong influence by the teacher in generating learner engagement and challenge (Carrington, 2006; Cornelius-White, 2007; Gibbs & Poskitt, 2010; Milne & Otieno, 2007; Strahan, 2008; Tsai, Kunter, Ludtke, Trautwein, & Ryan, 2008). As Gibbs & Poskitt (2010) summarise, "engagement is malleable by the actions of teachers" (p. 10). It is possible, they add, for teachers to "hinder or foster student engagement....to move students towards being emotionally and cognitively engaged learners, thereby increasing students' learning and achievement" (p. 13).

Teachers utilise a range of pedagogical actions to generate all types of learner engagement and challenge, especially (but not exclusively) cognitive engagement. This includes (for example) listening actively to learners within teaching and learning contexts, asking them higher order questions, prompting them toward higher order thinking, acknowledging their

wishes, responding directly to their questions, acknowledging their perspectives, allowing them to work independently from time to time and providing time for them to reflect on their learning (Tsai et al., 2008). They also model risk-taking and being strategic as cognitive assets when writing (Cornelius-White, 2007). Within the context of instructional writing, an effective teacher ensures that all of these actions are clearly evident as he or she discusses, demonstrates and explains text construction issues with groups of learners or individuals, often within the context of shared or collaborative writing of a text (Brown, Reumann-Moore, Hugh, Cristman, & Riffer, 2008).

As discussed in **Section 2.3.1**, teachers engage their students in learning by knowing them well as individuals with diverse cognitive, social, emotional and physical needs that can be recognised through strategically developed learning tasks. But they also engage them by working with them (from time to time) as individuals or in small groups. It is useful to work with the whole class when (for example) building a shared experience or understanding of a task, but not so useful when addressing diverse learning needs (Paratore & McCormack, 2009). Learners at all cognitive levels engage better when they are able to work at their own level and rate, often in small-group learning contexts (Paratore & Indrisano, 2003; Paratore & McCormack, 2009; Reutzel, 2007; Schumm & Avalos, 2009; Wilkinson & Townsend, 2000; Worthy, Hungerford-Kresser, & Hampton, 2009). There is considerable research evidence that working with learners in small group contexts not only motivates and engages learners but also enhances achievement and builds independence amongst them (Paratore & McCormack, 2009).

Instructional groups can be formed either homogenously or heterogeneously (Paratore & Indrisano, 2003; Paratore & McCormack, 2009; Schumm & Avalos, 2009; Worthy et al., 2009). Homogenous groups can take the form of "ability groups" (often long-term groups based on learners' pre-tested ability levels) or "flexible groups" (based on learners' emerging but varying needs and often for short-term periods of time). Flexible groups are, in fact, sometimes referred to as "assessment data groups" which are formed when data indicate several learners with similar learning needs (Reutzel, 2007). They are often regarded more positively than long-term ability groups because they enable teachers (and learners) to move beyond pre-determined and restrictive beliefs about capability (LeTendre, Hofer, & Shimizu, 2003; Paratore & Indrisano, 2003; Paratore & McCormack, 2009; Reutzel, 2007; Worthy et al., 2009). Homogeneous groups are usually directed or guided by a teacher.

Heterogeneous groups, on the other hand, are often learner-led. They can take the form of "co-operative" or "collaborative groups", or "peer tutoring groups". Learners need opportunities (from time to time) to work collaboratively and co-operatively with each other (Carrington, 2006; Milne & Otieno, 2007). This not only helps them to engage more in learning tasks but also to become more self-regulated (Gibbs & Poskitt, 2010).

It is also necessary to differentiate instructional strategies if learners are to engage fully in learning tasks (Paratore & McCormack, 2009; Reutzel, 2007; Schumm & Avalos, 2009; Tomlinson, 2003; Worthy et al., 2009). Within the context of instructional writing, this might mean the teacher deciding that a group of mainly high achieving learners require just guided exposure to exemplary or model texts before undertaking a particular writing task, whereas a group of mainly low achieving learners probably require guided instruction (through active demonstrating and questioning) about how to begin the same task. If a similar instructional approach was used with both groups, the risk of disengagement for both groups (through frustration or boredom) would be significant. Tomlinson (2003) refers to differentiated instruction as "responsive instruction" (p. 2), based on the notion that instructional decisions are made in relation to learners' diverse needs. As Reutzel (2007) states:

> Despite the fact that every [learner] needs to be taught, to varying degrees, all of the critical components of the literacy process, this is not meant to imply that a one-size-fits-all instructional approach is either desirable or would be equally effective with all [learners]. (p. 320)

It is hypothesised that all teacher participants (in this cohort of exceptional teachers) will utilise a range of pedagogical actions that lead learners toward full and meaningful engagement in writing tasks. It is anticipated that it will be possible, by ascertaining which actions are most effective, to add to the research literature on what full and meaningful engagement actually looks like in effective writing classrooms. It will be especially useful to identify what the concept of "grouping for instruction" looks like in these classrooms as the operationalisation of this concept (contextualised in writing) is relatively new to some teachers of older primary-age learners (Worthy et al., 2009).

2.4.7. Classroom organisation and management

There is some research evidence recognising the importance of classroom organisation and management in generating learner gains (Flood & Lapp, 2000; Tompkins & Tway, 2003). It

is difficult, however, to locate empirically driven research literature that focuses specifically on the impact of classroom organisation and management on learning gains in literacy. Many relevant findings are contained, instead, within generic research studies on effective literacy practice.

For learners to achieve expected learning outputs and make anticipated learning gains over time, they need to operate in learning environments that are organised and managed as enabling and efficient classrooms (Emig, 1983; Konrad, Helf, & Joseph, 2011). Konrad and colleagues (2011) define the concept of learning enablement and efficiency as "teaching and managing a classroom in a way that yields desired outcomes while using no more time, effort or resources than necessary" (p. 68). If a classroom is characterised by "structure and predictability", it is more likely that the teacher can focus on providing instruction rather than managing behaviour (Konrad et al., 2011).

This section of the study focuses on the actions that effective teachers of writing undertake to establish and implement the organisation and management of such a classroom. It anticipates the discussion of what the cohort of exceptional teachers in this study do to establish and implement enabling and efficient writing classrooms.

In an enabling and efficient classroom, the teacher establishes, communicates and promotes clear guidelines for task achievement and routines for task implementation with and for learners (Hall & Harding, 2003; Konrad et al., 2011; Langer, 2001; Reutzel, 2007; Tompkins & Tway, 2003). This involves setting clear directions (often written) about what is to be achieved during a lesson and developing firm behavioural boundaries (usually verbal) that are designed to help learners maintain a focus on learning during the lesson. Learners benefit from the security of a clear and explicit framework that allocates space and determines rules, directions, schedules, and familiar routines if they are to maintain learning intensity (Reutzel, 2007).

Within the context of instructional writing, such a classroom is one in which learners understand clearly what is expected of them as developing writers, for both the long and short term. They receive sufficient time and opportunities to undertake and complete writing tasks and are able to access appropriate writing resources (both paper and electronic), especially if writing independently. They also receive opportunities to discuss with others (including the teacher) their own and others' writing so as to solve text-formation problems and celebrate achievement. This happens best when environments are positive, encouraging

and settled in tone, and print-rich in appearance (Hall & Harding, 2003; Konrad et al., 2011; Langer, 2001; Parr & Limbrick, 2010; Reutzel, 2007).

An effective teacher of writing promotes guidelines which communicate an understanding of lesson components and how they will be covered, an indication or approximation of how much text is to be generated during a particular period of time, or the maximum noise level expected of learners during the period. Routines for learners might include how to move from the central learning space and commence the writing task independently, how to set work out on paper or screen when crafting and re-crafting texts, or how to use classroom resources efficiently to make changes to writing. The teacher also has effective management strategies (often verbal) in place for reinforcing positive application of pre-determined expectations and routines for generating texts, and for challenging transgressions of them. Classroom rules, consequences, and schedules are visible, clearly communicated and consistently applied so learners know what to expect during a lesson. The teacher has written or electronic records of learner progress in place that can be utilised for planning (Konrad et al., 2011).

Establishing and promoting appropriate behavioural expectations and routines is particularly important if the teacher holds a commitment to implementing differentiated instruction (Paratore & McCormack, 2009; Reutzel, 2007). If the teacher is to focus on the instructional needs of one group of learners at a particular point in time, clear expectations and routines for task achievement need to be in place so that others can work independently or collaboratively in an efficient way (Langer, 2001). The implementation of effective management strategies is critical if learners are to function and focus without the direct supervision of the teacher. A settled, focused classroom also releases the teacher to make equitable teaching and learning contact with as many learners as possible during a lesson.

In a well-organised and well-managed writing classroom, learners hold and utilise sufficient knowledge of the processes and strategies that effective writers use (Paris & Winograd, n.d.; Perry & Drummond, 2002). Holding this knowledge enables them to utilise it proficiently and flexibly, especially when writing independently.

Efficient timetabling and scheduling by the teacher is yet another condition of effective classroom organisation and management. This is so that learners receive sufficient time and opportunities not only to acquire new skills or understandings but also to practise their learning (Farnan & Dahl, 2003; Dyson & Freedman, 2003; Flood & Lapp, 2000; Konrad et

al., 2011; Reutzel, 2007). As Reutzel explains within the context of literacy learning, "While teaching the critical components of the literacy process is important, so too is allocating sufficient time for [writing] each day" (p. 315). Flood & Lapp (2000) assert, in fact, that one of the key conditions of learners becoming proficient writers is that they work within "an effectively organised writing classroom in which they are offered opportunities to write frequently" (p. 233).

It is difficult, however, to ascertain how much time is sufficient for learners to practise their learning. This is primarily contingent on the state of learner needs and engagement as well as the emergence of authentic purposes for learning.

Some researchers have expressed concern, however, about learners being given insufficient time to learn about and practise text formation. Gilbert & Graham (2010) report (in their survey of writing teachers) that most upper primary teachers provide writing instruction for approximately 1.25 hours per week and their students spend approximately two hours per week writing. This averages approximately 40 minutes per day for writing instruction and practice. They conclude, in fact, that "participating teachers reported spending only 15 minutes a day teaching writing" (p.511) and that "students averaged just 25 minutes a day writing text at least paragraph length or longer" (p. 511). They suggest that this is "worrisome....[and] that more time should be devoted to writing and writing instruction" (p. 511). Shanahan (2004) appears to agree as he recommends that a minimum of 120 minutes per day be allocated to literacy instruction (including writing) in the primary school.

As a cohort of exceptional teachers, it is hypothesised that the classrooms of the teachers in this study will be efficiently organised and managed. But it will be useful to note the actual features of efficient organisation and management that they demonstrate, especially the expectations and routines they establish so as to generate high quality outputs from learners. It will also be important to note time allocations given to instructional writing lessons, given researcher concerns and inconclusiveness about this.

2.4.8. Self-regulation

A range of researchers contend that the effective implementation of self-regulated learning habits and behaviours by learners is also an important generator of positive learner outcomes (Paris & Winograd, n.d.; Perry, Hutchinson, & Thauberger, 2008; Perry & VandeKamp, 2000; Schunk & Zimmerman, 2007; Zimmerman, 1990). They contend that effective teachers promote (through strategic use of selected pedagogical practices) learning

habits and behaviours amongst learners that foster independence in learning. Butler & Winne (1995) suggest that self-regulated learning is "a pivot upon which students' achievement turns" (p. 245).

The following discussion of self-regulated learning habits and behaviours and what effective teachers do to promote such habits and behaviours is intended to frame the discussion of what the cohort of exceptional teachers in this study know and do to develop self-regulation amongst their students as writers. This is a particularly important discussion in that a number of researchers suggest that building self-regulated learning habits and behaviours within learners is, indeed, a critical goal of the teaching and learning process (Butler & Winne, 1995; Perry & Drummond, 2002; Zimmerman, 1990).

Self-regulated learners are metacognitively, motivationally and strategically engaged in learning (Perry et al., 2008; Zimmerman, 1990). They work in learner-centred rather than teacher-centred classrooms in which they largely take control of their own learning. This means taking some responsibility for selecting and planning their own learning tasks, setting personal goals that relate to their perceived needs, analysing the learning demands in selected tasks, interrogating (and using) their repertoire of problem-solving strategies as they undertake the task, organising their own learning pathways as they move toward completion of the task, seeking out advice and information that they decide is necessary for making changes to the developing output, self-monitoring and self-evaluating their own progress at various points along the learning pathway, and recognising the potential benefits of both learning successes and failures (Perry, 1998; Perry & VandeKamp, 2000; Perry et al., 2008; Zimmerman, 1990). Attending to these processes enables learners to be knowledgeable, self-aware and decisive as they transfer learned processes and strategies from one learning context to another.

Effective teachers employ diverse instructional approaches that "offer direction and insight" into the processes of self-regulated learning (Zimmerman, 1990, p. 14). Self-regulation can be taught in diverse ways. It can be taught through explicit instruction, directed reflection, or metacognitive discussions (Paris & Winograd, n.d.). Students can, for example, be taught reflective skills for making appropriate learning choices, organisational skills for undertaking learning activities independently, self-monitoring skills for assessing progress and achievement and for setting new learning directions, and problem-solving skills for overcoming learning challenges (Perry & Drummond, 2002). Effective teachers recognise

that the provision of particular teaching and learning programmes (such as the "workshop" approach to instructional writing) does not by itself lead to learners mastering self-regulatory learning habits and behaviours—instead, it is the planned teaching of organisational, analytical and reflective skills within the programme that generates such habits and behaviours (Perry, 1998).

Within the context of instructional writing, effective teachers understand that fostering some sense of ownership of the writing task, topic or activity amongst learners generates self-regulated learning habits and behaviours (Paris & Winograd, n.d.; Perry & Drummond, 2002). They recognise that involving learners in the selection of writing task, topic or activity enables them to develop commitment to that particular task, topic or activity. As Perry & Drummond (2002) explain, "when students have choices, they are typically more interested in and committed to activities, and committed learners are more likely to increase effort and persist when difficulties arise" (p. 306).

Effective teachers also recognise the importance of encouraging learners to set goals for themselves in order to build self-regulated learning habits and behaviours (Black & Wiliam, 1998; Black et al., 2003; Clarke, Timperley, & Hattie, 2003; Zimmerman, 1990). Goals for writing can be established from a range of assessment sources (including teacher and peer discussions), but they should be established principally by learners self-monitoring and evaluating their progress and achievement in relation to understood criteria for success (Black & Wiliam, 1998; Black et al., 2003; Clarke et al., 2003). Paris & Winograd (n.d.) explain that learning goals are "most effective when chosen by the individual….When goals are set by others, behaviour is compliant or obedient rather than self-directed" (p. 10).

Effective teachers assist learners to become self-regulated goal setters through purposeful discourse during text formation processes. Through strategic questioning and prompting, learners are assisted to incorporate goal-directed thinking into their processes for planning, crafting and re-crafting texts. Teachers offer external prompts, but eventually remove them so that learners can learn to prompt themselves through self-directed goals (Galbraith & Rijlaarsdam, 1999).

Teachers also promote the development of self-regulation within learners by encouraging and enabling them to transfer what they have been taught to learning contexts in which they have to work independently. This means being guided rather than directed by the teacher (Borkowski, 1992; Paris & Winograd, n.d.; Perry & Drummond, 2002; Schunk &

Zimmerman, 2007; Zimmerman, 1990). This usually involves the teacher demonstrating and explaining appropriate writing strategies to learners (such as word or sentence formation strategies, or strategies for re-crafting texts), guiding emulation of the strategies at an appropriate level, promoting independent or self-controlled application of what has been observed by learners, and encouraging adaptation of what has been observed to emerging personal or contextual challenges (Schunk & Zimmerman, 2007). The degree of guidance needs to be lessened as learners acquire knowledge, proficiency and confidence.

The eventual aim of effective teachers of writing is to ensure that learners can operate confidently and proficiently as they undertake writing tasks away from any teacher guidance; that is, as they write independently or collaboratively with other learners, either within the classroom or outside the classroom (Perry & Drummond, 2002). If learners are to operate efficiently in such contexts, teachers need to provide instruction on independent learning strategies related to writing development. This means demonstrating and explaining the organisational, social, self-monitoring and problem-solving strategies required to be successful as independent learners (Perry & Drummond, 2002). This might involve, for example, learners being taught how to think metacognitively about text formation and re-formation processes, how to manage time and resources if successful writing outputs are to be produced, how to recognise and control cognitive and management challenges that arise while writing (including how and when to seek support), how to reflect on progress, self-monitor the effectiveness of writing attempts and set developmental goals from them, or how to discuss draft writing constructively and encouragingly with others (especially what to say, how to listen and how to respond to what has been heard). As explained by Zimmerman (1990), "conveying knowledge of…writing strategies does not improve acquisition unless self-monitoring and related decision-making procedures are taught specifically" (p. 10).

There is, however, some variation in thinking amongst researchers on the significance of self-regulation as a key component of becoming an effective writer. For example, in their discussion of Zimmerman & Risemberg's (1997) social cognitive model of self-regulated writing, Graham & Harris (1997) suggest that "the role of self-regulation in writing may be more modest than commonly assumed" (p. 104). They suggest that many writing tasks (such as composing personal anecdotes) do not require the writer to call on their long-term cognitive memory to the extent that Zimmerman & Risemberg imply is a critical factor of being self-regulated as a writer. They suggest, in fact, that much school-based writing is

writing-as-remembering or writing-by-pattern that requires minimal planning or revising (Scardamalia & Bereiter, 1986). But whether the argument is for "too much self-regulation" or "insufficient self-regulation", there seems to be strong consensus amongst researchers about the actual instructional approaches and strategies (as outlined) that teachers should utilise to generate self-regulating habits and behaviours within learners as developing writers.

2.5. Conclusions: How the framework guides the research

This conceptual framework of effective literacy pedagogy, organised around a set of dimensions of effective practice and instructional strategies that appear (from the literature) to generate higher than anticipated learner gains in writing, will provide the lens through which the investigation into writing instruction in this study is viewed. This means that the observed practices of teacher participants (as a cohort and as individuals) will be analysed in relation to the instructional dimensions and strategies contained within the framework. Points and degrees of similarity and difference between the idealisation of effective literacy practice that the literature suggests and the practice of teacher participants in this study will be noted so as to build a stronger understanding of what effective teachers of writing *actually do* in order to generate superior learner gains.

There are, of course, major instances of functional overlap between each of the dimensions in the framework, as was apparent in the previous discussion of each of them. Teacher actions can have multiple functions across dimensions. This suggests, as previously noted, that each dimension should not be considered or analysed operationally in isolation from others. The most significant overlap relates to the dimension of "engaging and challenging learners". If, for example, learners are engaged fully and meaningfully in a writing task, it is probable that the teacher will have encouraged and enabled them (for instance) to help to select the task, establish a learning goal that promotes success in the task, note task outcomes as demonstrated through direct instruction, and be self-regulatory as they adapt the task to their perceived level of challenge. As cited previously, Hall & Harding (2003) note that effective literacy instruction is "a complex interaction of many components, an intelligent weaving together" (p.42) of a wide variety of components.

But exploring the essence of each dimension contained within the conceptual framework (as a set of instructional strategies) is still worthwhile in order to identify the features of effective literacy practice, what these features *look like* in an effective writing classroom

and how they relate to each other. Again, as cited previously, Graham & Perin (2010) suggest that "we do not know what dose of each treatment [dimensions and strategies] is optimal, how these treatments are best combined, and what combination of treatments work best for which [learners]" (p. 328).

It is hypothesised that proficient implementation of all dimensions and strategies contained within this framework will be critical in generating higher than anticipated learner gains, especially when viewed through the perspective of an exceptional cohort of teachers. But it will be especially interesting to note whether any emerge as appearing to hold a particularly strong association with positive outcomes for learners. However, developing this framework as a holistic concept of effective practice has suggested that foregrounding any particular dimensions or strategies through quantitative or qualitative analysis will need to be considered within an understanding that all identified dimensions and strategies will probably need to be operationalised proficiently for any foregrounded ones to be especially effective. The sum of the whole will probably be greater than the sum of the parts.

Chapter 3: Methodology

Having developed a conceptual framework of effective literacy practice in **Chapter 2**, the focus of this chapter is to describe and discuss how features of writing instruction deemed to be critical (in relation to positive outcomes for learners) are to be ascertained. This includes the research design that was employed to gather, aggregate, analyse and interpret data, the links with other studies that influence methodological decisions made for this study, and the processes (including tools) that were utilised to select participants and gather, aggregate, analyse and interpret data that emerged. Issues of reliability and validity in the study are also explored in this chapter, both in relation to the quality of the data and how the data were generated.

3.1. An introduction to the research design

The research study employs a mixed methods design (Caracelli & Greene, 1993; Creswell & Plano Clark, 2011; Dellinger & Leech, 2007; Johnson & Onwuegbuzie, 2004; Leech, Dellinger, Brannagan, & Tanaka, 2010; Tashakkori & Teddlie, 1998). A combination of qualitative and quantitative data gathering, aggregation and analysis approaches and techniques are used to address the key research goal of identifying and describing critical features of effective writing instruction. Functional relationships between teacher inputs and learner outputs are explored to suggest possible associations between aspects of pedagogy and learning within the context of writing.

However, the act of using both qualitative and quantitative data gathering, aggregation and analysis approaches does not by itself give the research a mixed methods design. Rather, it is the process of using both approaches in combination with one another and to comment on one another that qualifies as this design (Croninger & Valli, 2009; Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 1998). Each approach is used as a means of exemplifying, interrogating and triangulating the significance and validity of data that emerge from the other approach (Patton, 1990). Tashakkori & Teddlie (1998) contend, in their handbook on mixed methodology, that both qualitative and quantitative data can be gathered, aggregated and analysed simultaneously so as to ensure that the content of one set of data is made "more meaningful and understandable" (p. 50) by the content of the other set. As Caracelli & Greene (1993) suggest, integration of one set of data into another offers "fresh insights and new perspectives that enhance conceptual understanding [of the data]" (p. 203). This is

an appropriate research design for attempting to capture the multi-dimensionalities and complexities of classroom practice (Berliner, 2002; Croninger & Valli, 2009; Willis, 2009). As stated succinctly by Johnson & Onwuegbuzie (2004), "Words, pictures and narrative can be used to add meaning to numbers…[and] Numbers can be used to add precision to words, pictures and narratives" (p. 21).

For this study, the intention is for the learner output data (mostly learner gain and achievement variance data that have been gathered, aggregated and analysed using quantitative approaches) to be made more meaningful and understandable by links with information from the teacher input data (data on teachers' instructional practices that have mostly been gathered and aggregated using qualitative approaches, analysed using mostly quantitative approaches and discussed using mainly qualitative approaches). Borrowing Tashakkori & Teddlie's terms, "quantitizing techniques" will be applied to qualitative data and "qualitizing techniques" will be applied to quantitative data (Tashakkori & Teddlie, 1998, p. 126). This means, for example, that scored data on teachers' instructional practices (involving measures of central tendency, variability and relative standing) will be generated in relation to a set of criterion-referenced indicators but only through close inference of several sets of rich observation and interview material (Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 1998). Scored data will ultimately be utilised to foreground or focus on aspects of effective practice that appear to warrant further interrogation through qualitative analysis. It is intended that qualitative analysis of the sets of observation and interview material will add depth and breadth to the analyses and interpretations (or probabilities and likelihoods) that emerge from the research.

3.2. Methodologies of comparable studies

Having decided upon a broad research design, it is useful to reflect on the methodologies employed by researchers in other comparable studies so as to assist in making decisions about the particularities of the data gathering, analysing and interpreting processes to be employed (Cresswell, 2008). In this section, the methodologies (similarities and differences) employed by the authors of the eight research studies utilised to develop the conceptual framework that guides this study are described and how they helped to form methodological decisions made for the study are discussed. Some preliminary discussion of this was undertaken in **Section 2.1**.

As an initial step in examining the eight research studies, it is important to reiterate that two of them (Graham & Perin, 2007; Hall & Harding, 2003) are meta-analyses of a wide range of other researchers' quantitative and qualitative studies. To complete these meta-analyses, the authors employed systematic review protocols and procedures for locating studies from a literature search, screened them through use of a set of explicit criteria and keywords for possible inclusion or exclusion in their reports, screened them further through use of data-extraction procedures and in-depth scrutiny so that decisions about trustworthiness could be made, and derived conclusions or themes from them. For both studies, each stage of the meta-analysis process was checked for reliability by one or two external reviewers working independently of each other. Hall & Harding (2003) used protocols and procedures published by the *Evidence for Policy and Practice Information and Co-Ordinating Centre* as *EPPI-Centre Methods for Conducting Systematic Reviews* (www.eppi.ioe.ac.uk) whereas Graham & Perin (2007) followed protocols and procedures used by researchers of previous meta-analyses (Bangert-Drowns, 1993; Goldring, Russell, & Cook, 2003; Graham, 2006; Graham & Harris, 2003; Hillocks, 1986). A significant point of difference between the two studies, however, relates to the intent of each. Whereas one (Hall & Harding, 2003) is a narrative summary of "good literacy practice", the other (Graham & Perin, 2007) signals "good literacy practice" through calculating and reporting effect size differences for a range of instructional approaches and strategies.

Being meta-analyses rather than empirically driven research studies, there is minimal cross-over between the methodological decisions made by the authors of the two reports and those made for this study. However, the systematic review protocols and procedures used by both sets of authors (but especially by Hall & Harding) influenced strongly the protocols and procedures used when undertaking the literature review that generated the conceptual framework for this study outlined in **Chapter 2**. Most steps of a systematic review were followed closely.

As the outcome of the other six key studies is similar to the intended outcome of this study—namely, a narrative but empirically driven summary of "good literacy practice" based on close and direct analysis of the pedagogy of a selected cohort of teachers—there are significant cross-overs between the methodological decisions made by the authors of these studies and those made for the current study. They principally relate to selection of study participants, and procedures for collecting, analysing and interpreting data. However, Medwell and colleagues, in the 1998 published account of their study, provided minimal

evidence of the methodological decisions made. Hence, little reference is made to this study in the following discussion.

The variation in how the authors of the six key studies selected study participants was reported briefly in **Chapter 2** (p. 15). Although teacher participants in most of the studies were selected through empirical student-achievement evidence and either recommended or confirmed for inclusion through "expert other" advice, there was some variation in how this was done. It was done either by approaching high achieving schools (as nominated by others) and seeking high achieving teachers within the schools (Langer, 2001; Parr & Limbrick, 2010) or by approaching high achieving teachers (as nominated by others) directly across a range of schools (Medwell et al., 1998; Pressley et al., 1997; Pressley et al., 1998). When "expert others" (such as district supervisors, reading supervisors or literacy consultants) were asked to nominate teachers, they were sometimes given criteria related to learner gains (Langer, 2001; Medwell et al., 1998; Parr & Limbrick, 2010). Others were given no specific criteria and were asked to consider whatever they regarded as useful (for example, "student enthusiasm", "quality of teacher practices", "involvement in professional development") when selecting teachers for nomination (Pressley et al., 1997; Pressley et al., 1998). No evidence was presented in any study of external checking of the selection of teacher participants in relation to criteria related to learner gains.

In one other study (Gilbert & Graham, 2010), teacher participants were approached randomly and invited to participate. Note, however, that the response rate from invited participants in this study was small.

Teacher participants in almost all studies were generally regarded as high-performing teachers. They were sometimes referred to as "really exceptional" (Pressley et al., 1997; Pressley et al., 1998), "beating the odds" (Langer, 2001) or "effective" (Medwell et al., 1998; Parr & Limbrick, 2010) teachers upon selection. In four studies (Langer, 2001; Medwell et al., 1998; Pressley et al., 1997; Pressley et al., 1998), their practice was compared to the practice of smaller cohorts of what Langer refers to as "typically performing teachers" (p. 850). But all teacher participants in all key studies were deemed to be, at least, "competent".

A group of "touchstone" students was utilised in two studies (Langer, 2001; Parr & Limbrick, 2010). They were "typically performing students" who could be interviewed or monitored in relation to the impact of teacher actions on student learning.

Decisions about participant selection for this study were influenced by decisions made by the authors of the key studies in several ways. In particular, for reasons of reliability and trustworthiness, a decision was made to use a combination of nominations by "expert others" (in relation to set criteria), empirical student-achievement evidence (using a common tool) and checking of evidence by "expert others" (also in relation to set criteria) so as to direct teacher participant selection. A decision was also made to use groups of touchstone students as a means of triangulating findings about teacher actions. Refer to **Sections 3.4.1, 3.4.2** and **3.4.4** for operational details about the selection of teacher and student participants.

However, the most significant decision made about participant selection related to whether the actions of exceptional teachers should be compared to the actions of teachers who represent "all teachers", as is the case in several of the key studies. Should this be a narrative but empirically driven study of a case of high-performing teachers or a comparative study of cross-case teacher types? Influenced by the previously mentioned assertion (refer to **Section 1.2**) that investigating the effective pedagogy of others assists teachers to inquire into the effectiveness of their own pedagogy and address issues of under-achievement by learners (Berliner, 2001, 2004; Block & Mangieri, 2003; Bond et al., 2000; Medwell et al., 1998; Shulman, 1987), the decision was made to focus on a case of high-performing teachers in order to analyse, in some detail, the impact of their pedagogical actions on learner gains. But it was anticipated that some differences among teacher participants might become apparent as data on teacher pedagogy and learner gains were collected and analysed, even though the teachers had been selected as an exceptional cohort who would (it was predicted) generate higher than expected learner outcomes. Refer to **Sections 3.6.3** and **3.6.4** for operational details of how some comparisons between teacher participants were made.

Variation in how the authors of the key studies collected, analysed and interpreted data was also evident. As noted previously (p. 16), four of the six key studies that were not meta-analyses employed mainly qualitative research methods through use of classroom observations and participant interviews (Langer, 2001; Medwell et al., 1998; Parr & Limbrick, 2010; Pressley et al., 1998), and two employed mainly quantitative methods through use of teacher questionnaires (Gilbert & Graham, 2007; Pressley et al., 1997).

But of those who used observations and interviews, there was some variation in how data were actually collected, analysed and interpreted. For example, there was variation in how many observations were undertaken. This ranged from nine or ten observations per teacher over a two-year period (Langer, 2001) to nine or ten observations over a six-month period (Pressley et al., 1998) to two observations over a four-month period (Parr & Limbrick, 2010). There was also variation in how many researchers observed each teacher. Whereas, for example, the teachers in the Parr & Limbrick study were all observed by the same two researchers at a time, those in the 1998 Pressley and colleagues study were observed by multiple researchers but just one at a time. Two groups of researchers recorded observed lessons and had transcripts made of them (Langer, 2001; Parr & Limbrick, 2010), while one relied on field notes alone (Pressley et al., 1998). In addition, all researchers co-analysed with teacher participants the content, structure and organisation of most lessons through post-observation, semi-structured interviews. But only two (Langer, 2001; Parr & Limbrick, 2010) talked also with touchstone students after observations.

There was also considerable variation in how data were analysed and interpreted. Two groups of researchers (Langer, 2001; Pressley et al., 1998) used themes and headings that emerged from the coding process as in a *grounded theory* approach to data analysis and interpretation (Glaser & Strauss, 1967), whereas one (Parr & Limbrick, 2010) used an *a priori* matrix of criterion-referenced indicators to analyse and interpret all observation and interview data (Tashakkori & Teddlie, 1998). All groups systematically coded the data that emerged, but only the group using the *a priori* rating matrix employed a numeric approach to coding. Parr & Limbrick (2010) rated observational and interview data in relation to an ordinal number set, illustrated through carefully defined criteria. The others used written descriptors (that emerged through analysis) to both categorise and describe data. For example, Pressley and colleagues (1998) coded teacher actions they noted through description by using the headings “activities”, “class groupings”, “instructional objectives”, “teacher affect”, “student affect”, “teacher language”, “student language”, “materials” and “classroom arrangement”.

There was, however, consistency in other approaches to data analysis and interpretation across the key studies. All groups of researchers sought validity of findings through inter-rater moderation, sometimes by using a reviewer within the research team and sometimes by using an external and independent reviewer. All also ensured that data collection and

analysis processes were triangulated (usually through a blend of observation, interview and reference to field notes), so as to promote reliability of findings.

Decisions about analysing and interpreting data were influenced in several ways by decisions that the authors of the key cited studies had made. The most significant was the decision to analyse and interpret all collected data in relation to a matrix of indicators that was designed *a priori* (as Parr & Limbrick, 2010, had done), rather than as a result of emerging themes and ideas. As there is an existing sound literature on the components of effective literacy pedagogy within the context of writing (refer to **Chapter 2**), it was decided from the outset that designing a comprehensive but concise tool based on this literature would be most useful for purposes of analysis and interpretation (Miles & Huberman, 1994). This ensured that the emphasis of the study would primarily be on "testing a theory" rather than "developing a theory". The "theory" relates to identified concepts of effective literacy pedagogy, and the "testing" (undertaken within the context of selected Year 5 to 8 New Zealand classrooms) would be developed around pre-determined indicators generated from a close analysis of the associated literature. Refer to **Section 3.5.1** for operational details on how this matrix of indicators was developed as a tool for analysis and interpretation.

A subsequent and related decision was made to code all data collected numerically in relation to the matrix (as Parr & Limbrick, 2010, had done) rather than descriptively (as other authors had done). This was made possible because of the existence of carefully defined indicators within the matrix. Transforming qualitative data (collected through observations and interviews) into numerical or quantitative data, as well as exemplifying quantitative data with qualitative illustrations, helps to define this study as "mixed methods" in design (as discussed in **Section 3.1**). Refer to **Sections 3.6.1, 3.6.2, 3.6.3, 3.6.4** and **3.6.5** for operational details of how collected data were analysed and interpreted.

Other decisions made were to ensure that sufficient observations and interviews were undertaken in order to generate a range of meaningful data for analysis and interpretation, and to promote validity of data collected and conclusions made through inter-rater moderation. Refer to **Sections 3.5.2** and **3.5.3** for operational details of how data were collected and **Sections 3.7.1, 3.7.2** and **3.7.3** for details of how data and conclusions were checked for validity. Note particularly why existing observation tools, such as the *Protocol for Language Arts Teaching* (Grossman et al., 2009), the *Classroom Assessment Scoring*

System (Pianta & Hamre, 2009) or the *Framework for Teaching Observation Survey* (Danielson, 2007), were not used during this study.

The most significant methodological difference between this study and the other key studies relates to the decision to use not only collected observation and interview data to create a narrative summary of "good literacy practice" (as a range of literacy researchers have done), but also to ensure that this summary is considered directly in relation to generating positive outcomes for learners over time. Rather than just identifying the effective practice of teachers who have generated high achievement gains by learners, this study sets out to calculate and report statistically significant correlations between particular teaching practices and levels of outcomes for learners as a prelude to interrogating further the significance of selected actions.

None of the key studies described the act of calculating statistically significant links between teacher pedagogy and positive outcomes for learners. Such calculations probably sit behind them but are not explicitly discussed. It is interesting to note, in fact, that the authors of several of the studies (Langer, 2001; Parr & Limbrick, 2010; Pressley et al., 1998) report "collecting student achievement data" (including writing samples) as part of their methodology, but make little mention of how they use the data to make empirical decisions about teacher effectiveness. Calculating significant links between teacher pedagogy and positive outcomes for learners is, in fact, evident in very few of the studies of effective literacy pedagogy consulted in preparation for this study. A noted exception is Grossman and colleagues (2013) study of teacher proficiency in language arts classrooms, in which the researchers correlate teacher proficiency statistically with value-added student measures. Another noted exception is Taylor, Pearson, Peterson, & Rodriguez (2003) but the focus of their study is reading instruction.

As reported in **Sections 1.2** and **1.5**, a range of studies verify the widely accepted belief that positive outcomes for learners are strongly influenced by teacher quality (e.g., Alton-Lee, 2003; Darling-Hammond, 1999; Hattie, 2003; Rowe, 2003), and another range determine the quality practices of teachers who have been identified as being able to generate positive outcomes in writing (e.g., Block & Mangieri, 2003; Langer, 2001; Pressley, Gaskins, Solic, & Collins, 1996; Pressley et al., 1998; Wharton-McDonald et al. 1998). But studies that focus principally on instructional writing and discuss explicitly how they make pedagogical and positive learning outcome correlations were unable to be located. It is anticipated that

this study will contribute significantly to the literature on effective literacy practice within the context of writing in its explicit attempt to make such links, as well as to illustrate and to exemplify them. Refer to **Sections 3.6.4** and **3.6.5** for operational details on how attempts were made to find these links.

In the following sections (**3.3** to **3.6.5**), an overview of the research actions is presented, followed by detailed descriptions of all the actions taken to collect, aggregate, analyse and interpret data for the study as appropriate.

3.3. An overview of research actions

The following is a summary of the major research actions undertaken to address the research goal. Although this summary is presented sequentially, some actions were interdependent and undertaken concurrently with others.

Table 1: Research actions undertaken

Step	Actions
1	To establish the research goal for the study, consider some key approaches to gathering, aggregating and analysing the data, and determine criteria for the selection of teacher and student participants.
2	To obtain ethical permission for the study from the University of Auckland.
3	To invite teachers to participate in the study and have the selection outcomes checked for validity by external experts.
4	To work with teacher participants at selecting touchstone students from each classroom.
5	To design and develop tools for gathering, aggregating, analysing and interpreting data from teacher participants. This included observation and interview tools and a framework of effective practice indicators against which aggregated data could be analysed and interpreted.
6	To confirm with teacher participants a tool for gathering, aggregating and analysing student achievement data.
7	To gather data from teacher participants over a period of 15 months. This involved undertaking an initial interview with each teacher near the beginning of the period and a concluding interview near the end, undertaking three hour-long observations of each teacher implementing writing instruction at regular intervals during the period, and undertaking a series of pre- and post-observation interviews with each teacher during the period.
8	To gather student achievement data during the main data-gathering period. Written language samples were collected from each student near the beginning (Term 1) and near the end (Term 4) of the main year of the study. Interviews with touchstone students were undertaken after each writing lesson that was observed.
9	To aggregate and analyse the teacher participant data for meaning. This initially involved quantifying the interview and observation data in relation to the framework of effective practice indicators. It subsequently involved calculating measures of central tendency, variability and relative standing from the quantified data in relation to the effective practice indicators.

Step	Actions
10	To have quantified data that have been analysed through inference checked for reliability and validity by an external reviewer. This principally involved the reviewer undertaking an inferential consistency audit of representative strands of quantified data.
11	To aggregate and analyse the student achievement data for meaning. After checking each dataset for validity, this principally involved ascertaining achievement gains and levels of variance demonstrated by students, and calculating the relative standing of effective practice indicators in relation to student achievement outcomes.
12	To determine points of correlation between the quantified teacher participant and student participant data through non-parametric statistical analysis. This included interpreting the significance of each point of correlation in relation to effective literacy practice.
13	To illustrate and exemplify (principally from interview and observation data) points of correlation between the quantified teacher participant and student participant data. Points of association from qualitative data were also made.
14	To make conclusions from the identified and exemplified points of association and correlation.

3.4. Selection of participants

In this section is a description of how the selection of research cases (teacher and student participants) for involvement in the study was made. A profile of all selected participants is also presented.

3.4.1. Teacher participants: Criteria for selection

Having developed a research goal around the concept of effectiveness in relation to Year 5 to 8 teachers of writing, it was necessary to seek and invite appropriate people to participate in the study.

The selection of teacher participants had to be conceptually rather than pragmatically driven. This meant selecting a purposive and reasonably homogeneous group of teachers who had all "experienced…the key concept being explored" (Cresswell & Plano Clark, 2011, p. 173), with the key concept being effectiveness within the context of instructional writing.

Having ascertained (as reported in **Section 1.5**) that "being effective" equates primarily with teachers having a positive impact on learner progress and achievement (Chetty et al., 2011; Goe, Bell, & Little, 2008; Hanushek, 2002), it was decided that data generated through an appropriate assessment tool would be used to suggest effectiveness. As the *Assessment Tool for Teaching and Learning* (asTTle) (University of Auckland, 2005a) is the principal norm-referenced assessment tool used by New Zealand Year 5 to 8 teachers of writing, it was logical that potential teacher participants needed to be able to demonstrate effectiveness in relation to student data obtained from it. This involved potential participants using the

asTTle writing tool to demonstrate that they could generate superior achievement gains for most students in their class within a finite period of time. Refer to **Section 3.5.4** for more details on the asTTle writing tool and its use throughout the study.

Utilisation of the asTTle writing tool generates an asTTle writing score (aWs) for each student according to writing proficiencies they demonstrate in a "test" script. As students move through year levels, they are generally expected to gain higher scores. Given that the mean gain in asTTle writing varies from 22 aWs points for movement between Years 5 and 6, to 14 aWs points for movement between Years 6 and 7, and 18 aWs points for movement between Years 7 and 8 (University of Auckland, 2005b), it was decided that a mean gain of 54 (or more) aWs points within a year would constitute superior achievement gains. This is deemed to be a superior gain in that it numerically indicates three years' gain in one year. Potential participants would submit asTTle writing data (including "test" scripts) that they had collected and assessed, but their capacity to demonstrate required gains would be checked for a judgment of validity by an external expert writing assessor moderating a range of scripts.

A key question related to the number of teacher participants to be included in the study. As data were to be collected and analysed mainly using qualitative research approaches (principally inferences made from open-ended classroom observations and semi-structured interviews), it was decided that a limited but well-delineated sample of cases would be appropriate. Creswell (2008) suggests that it is typical in qualitative research to study just a "few cases". This is because "the overall ability of a researcher to provide an in-depth picture diminishes with the addition of each new individual or site" (p. 217). Availability of time, financial and technology resources were also recognised as limitations on the sampling size (Creswell & Plano Clark, 2011).

All of these considerations pointed to the need for a moderate sized set of teacher participants. But they also pointed to the need for variability of teacher experience, student year level (within the Year 5 to 8 range), school size and type and school socio-economic ratings. By working with teachers from a range of schools (particularly schools with low socio-economic ratings), it was also anticipated that teachers who teach significant numbers of Māori and Pasifika students would likely become part of the study.

3.4.2. Teacher participants: Processes for selection

Having decided that teacher participants would be nominated for selection by "expert others", a group of 25 literacy facilitators (employees of the Ministry of Education's national Literacy Professional Development Project – LPDP) was asked to consider the effectiveness criteria for selection and nominate possible teacher participants. They nominated 17 Year 5 to 8 teachers who represented a range of experience, student year level, school size and type and school socio-economic ratings.

Teachers were nominated primarily because of their reputation amongst facilitators as effective teachers of writing. Twelve were teachers whom the facilitators had worked with in LPDP. Facilitators had worked with the other five in a range of other teacher development projects. In all cases, facilitators expressed confidence that they had observed nominated teachers closely as instructional practitioners and had tracked the progress of their students as developing writers.

Nominated teachers (and their principals) were approached through e-mail to solicit their possible interest in participating in the study. The research purpose and design was discussed with each teacher (and principal) and they were invited formally (through participant information sheets) to participate.

Thirteen nominated teachers (including the five who had not participated in LPDP) agreed to participate in the study. Of the four who declined nomination, two expressed concerns about the possible intrusiveness of classroom observations and two expressed concerns about the time commitment.

The teachers who agreed to participate understood that they needed to have their capacity to generate superior achievement gains for most students in their class confirmed, prior to taking part in the research. To this end, each teacher submitted two sets of asTTle writing data for all students in their current class—one set was a total score and a script collected from each student during Term 1 (T1), and the other was a total score and a script collected from the same students during late Term 3 or early Term 4 of the same year (T2).

All teachers who had accepted nomination were able to demonstrate the required mean gain of 54 (or more) aWs points within a year. The gain data submitted by these teachers ranged from a mean gain of 69 aWs points to 141 aWs points for their class. The data showed a collective mean gain of 93.36 aWs points within a year. Refer to **Section 3.7.3** for details of

how potential teacher participants' asTTle writing judgments were moderated by an external literacy expert.

All 13 teachers who had accepted nomination were selected for participation in the research. As previously indicated, they were regarded as a set of exceptional teachers.

3.4.3. Teacher participants: Profiles

Of the 13 teachers who were selected for participation in the study, 11 were female and two were male.

All teacher participants held a Diploma of Teaching or its overseas equivalent. Nine held graduate qualifications (usually undertaken as part of their pre-service training) and one held post-graduate qualifications. As well as holding tertiary qualifications in education, five also held tertiary qualifications in other subject areas (English, psychology, geography, linguistics, design technology). Although only one was enrolled in a recognised course of tertiary study during the year of data gathering, four others discussed plans to extend their tertiary qualifications within the next three years.

Participants ranged from being very experienced to moderately experienced teachers. Two had taught for less than five years, five for between six and ten years, two for between 11 and 15 years, two for between 16 and 20 years, and two for more than 20 years. Their length of teaching service at the beginning of the study ranged from four to 23 years with the average length being 11.6 years.

The range of ethnic backgrounds that teacher participants identified with was narrow. Twelve identified as NZ European and one as English. In addition, four had either undertaken teacher training or had taught extensively in the United Kingdom since 2000. As such, they were closely involved in implementing the highly structured UK National Literacy Strategy and its adjunct Literacy Hour (Shiel, 2003). All four discussed how their involvement in the Strategy strengthened their understanding of writing processes and their literacy instructional practices.

During the year of data gathering, teacher participants were teaching in a range of Year 5 to 8 classrooms, with the group almost evenly divided between Year 5 and 6 classrooms (n = 6) and Year 7 and 8 classrooms (n = 7). One participant was teaching in a Year 5 classroom, one was in a Year 6 classroom, four were in Year 5 to 6 classrooms, two were in Year 7

classrooms, one was in a Year 8 classroom and four were in Year 7 to 8 classrooms. This indicates that eight participants were teaching in multi-level or composite classrooms, whereas five were teaching in single level classrooms. None was teaching in classrooms that were other than mainstream with regard to student composition.

Most teacher participants had, in fact, focused on teaching in Year 5 to 8 classrooms throughout their teaching service. Seven had taught exclusively in Year 5 to 8 classrooms while just two had taught extensively in Year 1 and 2 classrooms.

Twelve had been teaching in Year 5 to 8 classrooms for at least two years prior to the period of data gathering. Only one had taught another year cohort (Year 3 to 4) during the two preceding years.

The average class size that teacher participants were teaching during the year of data gathering was 24.5 students. The largest class was 30 students and the smallest was 19 students.

As well as being classroom teachers, 10 of the 13 teacher participants held significant management or leadership roles within their school. Two held management roles as deputy or associate principal, four held leadership roles as team or syndicate leader and five held leadership roles as literacy leader. One held both a management and a leadership role.

They were also teaching in a broad range of school types. Four were teaching in contributing primary schools (with Year 1 to 6 classrooms), five were in full primary schools (with Year 1 to 8 classrooms) and four were in intermediate schools (with Year 7 to 8 classrooms). Few, however, were teaching in small schools. Six were in schools with more than 500 students, six were in schools with between 200 and 499 students and just one was in a school with fewer than 200 students. These schools represented a range of socio-economic communities. Five were schools situated in high socio-economic communities, two were schools in medium socio-economic communities, and six were schools in low socio-economic communities. The socio-economic level of each school is determined by the Ministry of Education (using census data associated with where the students attending the school live) and employed for applying differential funding whereby lower socio-economic schools receive more.

As indicated previously, all teacher participants had participated in a significant literacy-related professional development project in the previous four years. Nine had participated in

LPDP which was a two-year project requiring school leaders and teachers to inquire closely into the impact of literacy knowledge, beliefs and practices on learner achievement (Parr, Timperley, Reddish, Jesson, & Adams, 2006). The other four had participated in a range of one- or two-year school-based literacy projects that also focused on teacher inquiry and were led by private professional development providers who also worked in LPDP.

However, four female teachers withdrew from the study during the data-gathering period, leaving just nine teachers participating to completion. Two who withdrew taught a Year 5 to 6 class, one a Year 7 class and one a Year 8 class. Two teachers left because they accepted new teaching positions and two left for personal reasons. Learner gain data from the four teachers who withdrew are not included in the quantitative findings for the study because it was not possible to collect comparative data from the end of the data-collecting period. But as they had been deemed to be exceptional teachers, some samples of their practice are included as illustrative or exemplary examples.

3.4.4. Student participants: Processes for selection

Selection of student participants was principally guided by the concept of "convenience sampling" in that all students in each teacher participant's class were invited to be participants in the inquiry because of their presence in that class (Creswell, 2008, p. 155; Tashakkori & Teddlie, 1998, p. 76). Each class of students constituted a unit of analysis – albeit a unit with the cognitive, social and emotional diversity that could be expected of any mainstream classroom—whose learning and gains could be conveniently observed and analysed from time to time. This required researcher access to all students' writing assessment data, including examples of their draft and published writing, during the period of data gathering. However, there was little direct contact with most students in the class during the study.

Each teacher participant described and discussed the study with his/her students. Students (and their parents/caregivers) were given a participant information sheet that gave further information about the study.

Five to six students in each class were also selected by the researcher and teacher participants as touchstone students or student respondents. They were a heterogeneous but representative sample of students in each class with a balance of high, medium and low achievement indicated through asTTle writing data and scripts. Langer (2001) refers to touchstone students as "student informants" (p. 850) because the impact (or otherwise) that

teachers' actions have on learner gains can especially be explored through ongoing contact with them (Creswell, 2008; Tashakkori & Teddlie, 1998).

Each teacher participant discussed the possible selection of five to six touchstone students with the researcher in relation to the need for representative but heterogeneous sampling. Together, they discussed the study with each of the nominated students and their possible involvement in it. Touchstone students (and their parents/ caregivers) were given a participant information sheet that gave more detailed information about the study.

3.4.5. Student participants: Profile

A total of 336 students participated in the study during the year of data gathering with approximately equal numbers of male and female students. There was, however, a greater diversity of year levels. Fifty of the students were Year 5, 107 were Year 6, 66 were Year 7 and 113 were Year 8. Of the 336 students, 203 identified as being New Zealand European, 68 as Māori, 37 as Pasifika and 28 as "other". Note that these are categories employed by the Ministry of Education.

The asTTle writing data collected in Term 1 of the principal data-gathering year indicated student participants working (as anticipated) at a range of achievement levels. In particular, 121 students (36.01%) were identified as under-achieving to a significant degree in relation to expected achievement for their year cohort, as indicated through the *New Zealand Curriculum* (Ministry of Education, 2007, p. 45) and its accompanying documents (Ministry of Education, 2009, 2010). For students to be "under-achieving to a significant degree" they were achieving at least two curriculum sub-levels lower than the expected sub-level of achievement for their year cohort.

Of the 121 identified under-achieving students, most were male (n = 72). Almost half identified as being New Zealand European, with a quarter identifying as Māori, and the remainder identifying either as Pasifika or "other". The gender and ethnicity imbalance that emerged from this data (in relation to previously mentioned gender and ethnicity figures for "all student participants") is consistent with the imbalance that is apparent nationally amongst under-achieving students (Crooks et al., 2007; Gilmore & Smith, 2011). It was particularly important to identify students who were under-achieving to a significant degree early in the study, as the need to explore closely the impact of teachers' instructional practices on under-achieving learners is a key research goal.

From the total of 336 students, 75 were selected as touchstone students. Each participating teacher selected either five or six from his or her class. The touchstone students were representative of all student participants in terms of class level, gender and ethnicity composition.

However, almost a third of student participants withdrew from the study during the main data collecting period. This meant that 210 students remained until completion. Those withdrawing included all students from the classrooms of the four teachers who had withdrawn. It also included 19 who shifted school or class during the year from the other nine teachers' classrooms.

Twenty-one of the 126 students who withdrew from the study were touchstone students. Only three of the 21 were in classes that remained with the study until completion. Substitute touchstone students were not sought as there were at least four others in each of these classes.

Withdrawal of the 126 students significantly affected the ethnic composition of the student participant group. Students who identified as New Zealand European now comprised a greater proportion of the group (68.2% compared with 60.4% at the beginning of the study) and those who identified as Māori comprised a smaller proportion (13% compared with 20.2% at the beginning). The proportion of students who identified as Pasifika or "other" did not alter significantly from the beginning of the study. However, reduced numbers of Māori students meant that it would be difficult to make inferences or generalise from conclusions about teachers' instructional practices in relation to learner outcomes by Māori students.

3.5. Design of tools for gathering, aggregating and analysing data

A task concurrent with selecting participants was to design a range of tools for gathering, aggregating and analysing data related to the nature and degree of teachers' instructional practices needed for optimal achievement by learners within the context of instructional writing. An associated task was to design tools that generated data on learners' reflections about the writing programmes they were receiving and their progress and achievement as developing writers.

In order to ascertain what teacher-related features or combination of features are needed to generate optimal achievement, it was necessary (as stated previously) to observe teachers'

instructional practice closely, interview teachers about their practice and students about their learning, and correlate the apparent impact of these elements on student achievement gains. This process needed to be guided by well-constructed and reliable observation and interview tools which included not only observation and interview protocols and schedules but also a set of content analysis indicators for aggregating and analysing collected data (Tashakkori & Teddlie, 1998).

It was also necessary to use an appropriate tool for measuring learner gains and achievements in writing over time, if elements of teachers' instructional practice were to be related to levels and rates of student learning.

3.5.1. Designing and developing content analysis instruments

A decision was made early in the study to design and develop a content analysis matrix and associated instruments. As discussed in **Section 3.2**, it was decided that the matrix was to be an *a priori* document that would incorporate what the research literature defined as the key instructional strategies of effective literacy pedagogy within the context of writing (as outlined in **Chapter 2**).

The matrix was to provide an initial point for gathering, aggregating, analysing and interpreting qualitative data from observations and interviews but it could be added to or deleted from as new data emerged (Lincoln & Guba, 1985; Miles & Huberman, 1994).

Designing and developing the content analysis matrix involved five procedural steps. They were based on guidelines suggested by DeVellis (1991). As summarised by Creswell & Plano Clark (2011), the initial task is to determine what is to be measured and to become grounded in the constructs to be addressed. Subsequent tasks are to generate an item pool, determine the physical construction of the instrument and the scale of measurement, have the item pool reviewed, consider the inclusion of items from other instruments, and administer the instrument to a sample for validation (p. 189).

Step one in the design process was to develop some broad organisational parameters for the matrix. This was done by identifying and reflecting on the dimensions of effective practice that emanated from the literature review in **Chapter 2**. These dimensions related to the need for teachers to utilise a range of instructional practices designed to provide optimal support for students in diverse literacy learning contexts.

The following dimensions were identified from an iterative reading of the literature:

- *expectations* (the vision of achievement that teachers hold and communicate to learners, including achievement across the curriculum);
- *learning goals* (what teachers do and think about as they formulate learning goals for and with learners);
- *learning tasks* (what teachers do and think about as they devise learning tasks for and with learners);
- *direct instruction* (the instructional approaches and strategies that teachers consider and use when providing instruction);
- *responding to learners' work* (how teachers give feedback and feed-forward information to learners, the nature of this information and how learners use it);
- *engaging and challenging learners* (what teachers do to engage or motivate learners in learning tasks and to challenge them cognitively around the tasks at a level appropriate to their potential);
- *organisation and management* (what teachers do to organise, differentiate and manage instructional lessons effectively in the classroom); and
- *self-regulation* (actions that teachers take to give learners a sense of ownership or responsibility about what they are doing to develop as independent learners).

Variations of these dimensions are common in texts or studies that other researchers have published on effective pedagogy (e.g., Danielson, 2007; Grossman et al., 2013; Hall & Harding, 2003; Langer, 2001; Pressley et al., 1998).

Step two was to develop a set of precise and observable instructional strategies to be placed within the body of the matrix. These were drawn from evidence in the literature that supports the conceptual dimensions (as outlined in **Section 2.4.1** to **Section 2.4.8**). Fifty-two instructional strategies emerged from a close analysis of the literature.

Step three was to strengthen the matrix by grouping the instructional strategies around the dimensions that best matched them. It was anticipated that grouping them would assist manageability when aggregating, analysing and interpreting data. However, the grouping of

instructional strategies around dimensions of effective practice provided a significant challenge of organisation and categorisation. It became evident that some strategies could be placed under multiple dimensions. For example, it was possible that the strategy of "attending to differentiated learning needs through individualised or small group instruction and interactions" could be regarded as an important means of "engaging and challenging students" or as a key strategy of "classroom organisation and management". This meant making some priority categorisation placements, based on what appeared to be the major pedagogical concept or intent underpinning each strategy.

Refer to **Appendix B** for the content analysis matrix (with its 52 instructional strategies) that was designed to aggregate and analyse data from classroom observations and interviews in the study.

Step four was to extend the usability of the matrix by developing a set of three continuous descriptors for each instructional strategy (Creswell, 2008, pp. 174–176). This was done to help quantify and measure the level of operational proficiency that each teacher participant demonstrated for each strategy. Each descriptor includes what an objective observer would notice if each strategy were enacted at varying levels of proficiency, depth or confidence by the teacher.

Descriptors were developed for instructional strategies enacted at an *exemplary* level, a *proficient* level and a *basic* level. Other researchers have developed descriptors for levels of performance less proficient than *basic*—for example, "ineffective" (Schacter & Thum, 2004, pp. 425–429), "unsatisfactory" (Danielson, 2007, pp. 38–41), "inadequate" (Hoffman, Sailors, Duffy, & Beretvas, 2004, pp. 317–318)—but three categories only were established for this study as it was unlikely that any selected teacher would be rated unsatisfactory, ineffective or inadequate. All teacher participants had been selected because they were considered to be exceptional teachers.

Descriptors for strategies enacted at an *exemplary* level were represented by 3.0 as a point of measurement, those at *proficient* by 2.0 and those at *basic* by 1.0. In considering whether an instructional strategy was demonstrated *at* one of these three levels—or indeed *between* these three levels (represented by 0.5, 1.5, 2.5 as points of measurement)—it would be necessary to use a "best fit approach" when making evidence-based hierarchical inferences in relation to the descriptors (Tashakkori & Teddlie, 1998).

There was, however, no certainty that intervals between levels in the measuring tool were statistically equal. As such, the tool employs a "quasi-interval scale" that suggests rather than specifies degrees of continuous difference. This has implications for statistical analysis in that only non-parametric statistical tests can be used with tools that have a quasi-interval scale as they do not relate to patterns of normal probability distribution (Creswell, 2008, p. 176).

Refer to **Appendix C** for the set of continuous descriptors that was developed for each instructional strategy.

The final step was to organise careful checking of the content analysis instruments (the matrix and the set of continuous descriptors) for reliability and validity when applied to gathered data (Miles & Huberman, 1994; Tashakkori & Teddlie, 1998). This was initially undertaken by a team of external literacy experts who checked the instruments for comprehensiveness and accuracy. Refer to **Section 3.7.1** for details of how the checking was undertaken and some of the results of that process.

Checking was also undertaken in a small-scale pilot study by applying the instruments to some samples of observation and interview data for validation once data had been gathered (Creswell, 2008, p. 167). When trialled (through an initial observation and interview with one teacher participant and several student participants), minimal changes only were made to the content of the instruments. All changes related to the wording rather than the intent of criteria or descriptors.

3.5.2. Designing an interview schedule

An interview schedule was designed to be implemented with teacher participants and touchstone students in individual settings over time. This was designed in order to better "understand informants on their own terms and how they make meaning of their own lives, experiences and cognitive processes" (Brenner, 2006, p. 357).

The interview schedule was designed particularly to generate information that might not be apparent from classroom observations or document analysis. The aim was to elicit new information from participants, or to gather data that explained, exemplified or substantiated previous information.

A deductive approach was adopted when designing the schedule (Brenner, 2006). Key questions and probes, designed to explore the pedagogical principles that underpin the study, were developed prior to conducting each interview. Questions and probes were designed especially to give more information about each participant's knowledge, beliefs and understandings in relation to the dimensions of effective pedagogy and pedagogical strategies contained in the matrix.

As signalled in the overview of major research actions, the interview schedule was implemented with teacher participants at four particular points during the study. The first point was near the beginning when all teachers were interviewed extensively about their literacy-related backgrounds and experiences, their knowledge of writing and what writers do, their beliefs about effective literacy pedagogy and its impact on learner outcomes and their beliefs about their own use of instructional practices. This generated initial data that could be built on during the study. Refer to **Appendix D** for the main questions that were asked during the initial interview.

The second point was immediately prior to each observed lesson when the teachers discussed their rationale for the proposed lesson, how they had determined the rationale and what they anticipated doing during the lesson. The third point was immediately after the lesson when the teachers reflected on the impact of their actions and discourses on learner engagement and achievement in the lesson. This included discussion of "next steps" for students. Refer to **Appendix E** for questions that guided the pre- and post-lesson interviews.

The final interview point was near the conclusion of the data-gathering period when each teacher was re-interviewed extensively about issues of programme development and classroom organisation that had not previously been explored or required further exemplification. Questions were mostly asked about "topic selection", "grouping for instruction" and "learning goals". Refer to **Appendix F** for main questions that were asked during the final interview.

Each touchstone student was also interviewed immediately after each observed lesson. This was primarily to ascertain how the students perceived their specific learning from the lesson and what they believed the teacher had done to help them to be successful (or otherwise) during the lesson. Information obtained through these interviews ("student voice") contributed greatly to an understanding of each participant teacher's impact on learner

outcomes. Refer to **Appendix G** for the questions that guided the post-observation interviews with touchstone students.

All interviews were recorded on audiotape and transcribed in full by a professional transcriber who had signed a confidentiality agreement.

In designing the interview schedule, a range of interview protocols (such as the type of questions and probes to be asked) was addressed. The most important of these related to the effect of the interviewer on participant responses (Creswell, 2008; Tashakkori & Teddlie, 1998). Prior to conducting this doctoral research, I had had a national profile as a professional development facilitator and all teacher participants knew of me before the study began because of this profile. Some participants (n = 5) had, in fact, worked previously with me in this role. It was, therefore, necessary to check, through careful probing, that participants' responses during interviews reflected what they really thought of a situation or issue rather than what they thought I might expect to hear, given their relationship with me as a professional development facilitator (Miles & Huberman, 1994). There was a need to "reduce the possibility of controlled responses" (Tashakkori & Teddlie, 1998, p. 107). I was always aware of this challenge as I interviewed participants.

No touchstone students knew of me or my role before the study. But this necessitated building mutual respect and trust (through open communication between us) as soon as possible into the study.

3.5.3. Designing an observation schedule

Acknowledging that it is necessary to gather, aggregate and analyse data from multiple sources if classroom-based research findings are to be valid, teacher pedagogy was observed as well as discussed with teacher and touchstone student participants. Observations are an efficient way of understanding and theorising about people's behaviours. Within the context of classrooms, they provide rich and descriptive information about teachers' practices and students' experiences. Pianta & Hamre (2009) suggest that observations offer "an added, different perspective of the classroom that is not filtered through the perceptions of a classroom participant" (p. 112).

The goal of the observation schedule was to observe and record over time a range of classroom practices by teacher participants, especially teacher-learner discourses, within the context of instructional writing. Having ascertained through interview what teachers stated

they did during writing lessons, observing classroom behaviours was a way of ascertaining whether they actually did what they said they did. It was a way of investigating theory in use (Bell, 2005). It was anticipated that analysing observational data would particularly (but not exclusively) contribute to an understanding of the instructional practices needed for superior learner gains in writing.

There is a wide range of standardised observation instruments available for use by educational researchers, many of which are deemed to generate valid and reliable data about teachers' use of instructional practices. One of the most widely used is the *Protocol for Language Arts Teaching Observation* (PLATO) which is designed to capture features of English/Language Arts instruction (reading, writing, literature, grammar, oral language) in adolescent literacy classrooms (Grossman et al., 2009). Another is *Inside the Classroom – Classroom Observation Protocol* (ITC-COP) which enables researchers to analyse aspects of classroom culture and programme design, content and implementation (Heath et al., 2010). There is also the *Classroom Assessment Scoring System* (CLASS) which promotes analysis of classroom organisation strategies and the instructional and emotional supports that teachers use (Pianta & Hamre, 2009) and the *Framework for Teaching Observation Survey* which fosters analysis of classroom environment and teachers' planning and preparation, instructional strategies and professional responsibilities (Danielson, 2007).

However, none of these instruments has been designed specifically to analyse teachers' use of instructional practices during writing instruction. The PLATO protocol, with its capacity to capture elements of subject content, classroom talk, instructional scaffolding and classroom environment within language arts classrooms, is the instrument most closely aligned with the research goals of this study. But it was deemed to be partially useful only in that it does not have an exact capacity to capture teacher proficiency in relation to *Expectations* and *Self-regulation* (two of the dimensions of effective practice developed for this study). It was therefore decided that an existing observation instrument would not be an appropriate tool for use in the study.

Instead, open-ended or unstructured observations of three writing lessons by each teacher participant with his/her class were undertaken during the data-gathering period and the content analysis matrix was used to analyse the content of observed lessons. The first observed lesson was taught toward the end of Term 1 of the school year, the second toward the end of Term 2, and the third toward the end of Term 3 or the beginning of Term 4. Each

observed lesson was undertaken for approximately 45 to 60 minutes. It is important to note that teachers were requested to teach what and how they would normally teach within their normal time parameters when they were being observed. No intervention or feedback was provided between observations.

Creswell (2008) suggests that it is important to "conduct multiple observations over time to get the best understanding of the site and the individuals" (p. 223). This is especially important if an inquiry goal is to gather information on a broad range of instructional practices. It was not logistically feasible to undertake multiple observations of each teacher, but it was considered important to observe at least three lessons in order to seek varied examples of how particular variables in the content analysis matrix were addressed.

It was not, however, possible to observe three lessons by every teacher participant. For example, it was possible to observe only one or two lessons by the four teachers who withdrew at mid-point from the study. In all, the content of 31 instructional lessons were observed and analysed during the study.

A range of protocols needed to be addressed when developing and implementing the observation schedule, just as it was when designing the interview schedule. For example, it was necessary to address ways of recording what was observed as precisely as possible. It was also important to address ways of ensuring that the observer's presence and role was as unobtrusive as possible during observations (Bell, 2005; Creswell, 2008; Pianta & Hamre, 2009; Tashakkori & Teddlie, 1998).

The challenge of recording what was observed as precisely as possible was initially addressed by ensuring that all instructional practices demonstrated by teacher participants were captured fully by audio recording and transcribed fully by a professional transcriber (just as had been done for interviews). In addition, supplementary field notes were written during lessons which could be referred to when interpreting content. This meant that the behavioural nuances observed as well as the words uttered during observed lessons could be considered closely when analysing transcripts for content interpretation.

The challenge of ensuring that the observer remained as unobtrusive as possible during all observed lessons was also addressed. I was to act as a "non-participant observer" (Creswell, 2008) during all lessons. This meant that I needed to be not only "physically unobtrusive" but also "professionally unobtrusive" during observations. As stated previously, all teacher

participants knew of me, or had worked with me, in my national role as a professional development facilitator. Hence, there was a risk that some participants might behave during observed lessons in a way that they anticipated I would expect them to behave rather than in the way they normally behaved (Miles & Huberman, 1994). There was also a risk that I might analyse observed lesson transcripts in relation to my prior knowledge of participants, especially those who I had worked with previously. These were risks I reflected on with my research supervisors and I was always aware of as I observed lessons and analysed transcripts. I worked to be personally and professionally "quiet" during, after and between lessons.

3.5.4. Tools for gathering learner achievement data

Data on learner gains and outcomes in writing during the period of the study were gathered and analysed from each teacher participant's classroom. These data assisted in exploring what features (or combination of features) of teachers' instructional practices could be related to levels and rates of higher than anticipated student learning and more equitable learning outcomes for students.

Learner gains and outcomes were measured by a common tool and process. The *Assessment Tool for Teaching and Learning* (asTTle version 4) for writing was selected for this purpose (University of Auckland, 2005a). As stated previously, asTTle writing is the principal tool used by New Zealand Year 5 to 8 teachers to gather and analyse data on learner gains in writing. It requires students to undertake a pen-and-paper test for a range of purposes (writing to describe, narrate, recount, analyse, instruct, persuade or explain) and it requires teachers to assess the writing in relation to a set of norm-referenced and nationally moderated criteria (University of Auckland, 2005b). By producing a "writing score" for each student, it enables teachers to ascertain each student's gain (in relation to the tool's norms) as a developing writer over time. By relating the norms to the national achievement expectations (Ministry of Education, 2007, 2009), it also enables teachers to determine each student's achievement in relation to national expectations (University of Auckland, 2005b).

Teacher participants were requested to gather and analyse an asTTle writing script from each of their students twice during the four-term data-gathering period. The first occasion (T1) was near the beginning of Term 1 of the school year and the second (T2) was toward the end of Term 3 or the beginning of Term 4. Teachers were able to select any writing purpose for the exercise. Of the nine teachers who remained with the study until completion,

five required their students to write recount texts, two to write persuasive texts and two to write descriptive texts. All teachers required their students to write to the same purpose for T1 and T2. They were also requested to submit two sets of asTTle writing data for each of their students prior to the beginning of the inquiry. Refer to **Sections 3.4.1** and **3.4.2** for details of how these sets of data were utilised for confirmation of teacher effectiveness.

3.6. Aggregating and analysing the data

Having gathered a range of data from teacher and learner participants, the subsequent task was to aggregate and analyse it for meaning. This principally meant preparing the qualitative data (gathered through observations and interviews) for quantification (Tashakkori & Teddlie, 1998) and analysing it in relation to the content analysis matrix. It also meant validating all quantitative data gathered on learner gains in writing in preparation for analysis (Creswell & Plano Clark, 2011). Ultimately, levels of correlation would be sought between all forms of quantitative data that had been gathered or generated. These would be used as a signal of what dimensions of effective practice and instructional strategies warranted further interrogation as having a particularly strong association with higher than anticipated learner gains.

3.6.1. Preparing the qualitative data for analysis

As mentioned previously, all data gathered qualitatively (principally through observations and interviews) were recorded on audiotape. Recording on audiotape ensured that most of the participants' words and prosodic features (such as pitch, stress and intonation) were captured in full. Those that were not (especially some learner contributions in lesson observations) could generally be inferred from context.

Gathering qualitative data on audiotape restricted the capacity to record non-verbal features such as participants' body language. Descriptive field notes had to be referred to for non-recorded information that might add meaning to participants' utterances.

Recorded observations and interviews were transcribed verbatim by a professional transcriber and transcripts of observations and interviews with teacher participants were returned to participants for "member checking" of content (Creswell, 2008). In all cases, interview transcripts were returned with no changes made. Teacher participants were, however, more proficient than the researcher and the transcriber at inferring learner contributions from contextual clues in lesson observation transcripts.

The wide array of qualitative data that had been gathered needed to be converted into numeric data for quantitative analysis. This meant attributing ranked values to each teacher participant for each instructional strategy from evidence in the transcripts. The process of attributing ranked values for pedagogy was undertaken prior to calculating learner gains in each teacher's classroom so as to address any possibility of researcher bias in relation to students' achievement rankings.

Each observation and interview transcript was initially scanned closely and iteratively for illustrative data that linked to the dimensions of effective pedagogy and (especially) the instructional strategies contained in the content analysis matrix. This meant dividing each transcript into labelled segments and coding the content of each segment for meaning (Creswell, 2008). Segment labels related directly to the dimensions of effective pedagogy and the content codes linked directly to the range of instructional strategies.

The subsequent step was to assign a numeric rating (0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0) to each teacher for each instructional strategy, using evidence from the transcripts. This involved reflecting on the content of each coded segment of each transcript in relation to the hierarchical set of continuous descriptors (**Appendix C**) and making criterion-referenced numeric decisions. It was anticipated that quantifying the transcripts in this way would contribute significantly to determining the level of operational proficiency noted in relation to each strategy.

Segmenting and coding the transcripts and rating each segment required inferring meaning from each utterance in relation to the content analysis matrix. Lawson (2011) refers to this process as undertaking "high-inference observations, where degrees of behaviour are identified and assigned a numerical value" (p. 320).

But, as Miller (2003) indicates, inferring meaning from others' utterances is a cognitively challenging process. It involves a researcher not only seeking deductive evidence from a source but also recognising the significant role that the researcher's beliefs hold as the evidence is interpreted. The act of inferring meaning involves making reference to one's own knowledge, beliefs and values (Leech et al., 2010). Johnson & Onwuegbuzie (2004) suggest that what observers notice and observe "is affected by [their] background knowledge, theories, and experiences; in short, observation is not a perfect and direct window into reality" (p. 16). They further suggest that observations generate "probabilistic evidence, not final proof" (p. 16).

It is necessary, in fact, for a researcher to have his or her interpretations checked for inferential validity by independent and external reviewers. Refer to **Section 3.7.2** for details of how interpretations were checked for validity in this study.

But it was also understood that quantified data alone (as a set of numerical values) would not make teachers' pedagogical practices "come alive". This would require the addition of rich qualitative data. Miles & Huberman (1994), in their guide to qualitative data analysis, argue that "although words may be more unwieldy than numbers, they render more meaning than numbers alone and should be hung on to throughout data analysis" (p. 56). As well as generating quantitative data for non-parametric statistical analysis that might foreground areas of significance when considering features of effective writing instruction, it was understood that the transcripts would provide rich exemplifications of effective literacy pedagogy.

3.6.2. Preparing the quantitative data for analysis

Beside the qualitative data that had been quantified for analysis, the other set of quantitative data was the asTTle data that could indicate higher than anticipated learner gains and more equitable learning outcomes in writing over time. Preparing the asTTle data for analysis and interpretation, as presented by each teacher participant, involved "cleaning" it robustly (Creswell, 2008; Dasu & Johnson, 2003). This principally meant ensuring that each dataset was valid in that it was generated accurately in relation to the processes outlined in the asTTle tool (University of Auckland, 2005b) and the norm-referenced criteria that had been established for each writing purpose (University of Auckland, 2005b). This involved moderation of data. Refer to **Section 3.7.3** for details on how moderation was undertaken and some of the results.

Cleaning the dataset robustly also involved searching manually for and attending to missing data (Shaffer, 2006). Principally, this meant ensuring that asTTle writing score entries for T1 and T2 from each teacher were complete. For achievement gains and outcomes to be determined with certainty for a particular teacher participant, there needed to be valid T2 scores entered for all learners in their class who had valid scores entered for T1. Those who did not have valid scores entered for both times ($n = 19$) were removed from the dataset. All of these learners had moved schools between T1 and T2.

3.6.3. Aggregating the data

In order to analyse the wide range of quantified data that had been developed, it was necessary to aggregate it clearly and efficiently. The *Statistical Package for the Social Sciences version 20 (SPSS Statistics 20)* was used for this. With its capacity to generate and manipulate descriptive, bivariate and inferential statistics, *SPSS Statistics 20* was well suited to both aggregating and analysing the data that had been generated.

The first major task was to calculate descriptive statistics for each teacher participant's background, and their instructional practice in relation to the dimensions and instructional strategies contained in the content analysis matrix. A concurrent task was to calculate descriptive statistics for their students' gains and outcomes as developing writers over time in relation to an appropriate set of asTTle writing norm-referenced criteria.

To be able to calculate a statistical description of each teachers' background (as apparent at the beginning of the data-gathering period), numeric values were developed for a range of background features and entered into *SPSS Statistics 20*. Refer to **Section 3.4.3** for details on teachers' backgrounds as a set.

As described previously, a numeric rating from a 7-point scale (0.0, 0.5, 1.0…3.0) had been allocated to each participating teacher in relation to every instructional strategy in the content analysis matrix. To input these data efficiently, each rating was doubled and a unit of one added to the total so that whole rather than decimalised values could be entered.

The concurrent task was to calculate a statistical description of the achievement gains made by each teacher participant's students over time. Each student's asTTle writing score for T1 and T2 was entered. Numeric representations of their best fit curriculum levels for the deeper and surface features of writing (for T1 and T2) were also entered as were numeric values for each student's year level, gender, ethnicity, teacher and the socio-economic level of the school.

3.6.4. Analysing the data

Data gathered and aggregated through the study needed to be analysed in preparation for interpretation. This principally meant analysing both the teacher pedagogy and student achievement data and searching for points of association between the two datasets.

Analysing the student achievement data meant calculating achievement gains and levels of variance demonstrated by individual students and cohorts of students over time. By considering each student's T1 and T2 score in relation to normative achievement expectations established by the asTTle tool for each year level (University of Auckland, 2005b), it was possible to derive each student's gain between times through subtraction of expected achievement from their actual achievement. This enabled the mean and standard deviation of gains made over time by "all students" and by cohorts of students associated with each participating teacher to be calculated. It also enabled calculation of the degrees of achievement variance demonstrated by "all students" and by cohorts of students over time. Cohorts were based on gender or on under-achievement at the time of T1 data gathering. It has previously been noted (in **Section 3.4.5**) that it was not possible to analyse gains made by ethnic minority students (as groups) in most classrooms, as student numbers were insufficient to generate meaningful conclusions. Although all selected teacher participants were deemed to be exceptional, it was anticipated that there would probably be some differentiation between learner gains and between levels of variance in each classroom. It was important to calculate the actual differences as a prelude to linking positive outcomes for learners with levels of teacher pedagogy.

Analysing the teacher pedagogy data meant calculating the levels of operational proficiency that teacher participants held or demonstrated, both as individuals and as a participant set. This meant calculating measures of central tendency for each teacher in relation to each of the variables in the content analysis matrix. This particularly meant calculating the mean for each dimension of effective practice for each teacher. These calculations were from the summed scores that teachers had been allocated for each instructional strategy within the dimension.

Calculating these measures generated information about each teacher's ranking in relation to the other teachers. Just as differentiation between learner outcomes in each classroom had been noted, so it was anticipated that there would probably be some level of differentiation between each teacher's operational proficiency measures, despite the fact that they were all selected as exceptional teachers.

Calculating these measures also generated information about the relative standing of each dimension and instructional strategy in relation to the other dimensions and strategies. This would provide an initial indication as to whether teacher participants (as a set) achieved a

higher level of operational proficiency for some dimensions and instructional strategies than for others and would generate an inquiry into the possible pedagogical significance of some dimensions and strategies over others, albeit that they are presented operationally in conjunction with other dimensions and strategies.

Undertaking all of these calculations eventually meant being able to recognise and analyse possible points of association between particular dimensions of effective literacy pedagogy and instructional strategies and higher than anticipated learner gains and/or more equitable learning outcomes for learners.

As a lead in to this, links were calculated between rankings for each teacher's measurement of central tendency and variability in relation to the content analysis matrix, and rankings for their students' learning gains. It was anticipated, for example, that this would lead to an indication of whether any dimensions or instructional strategies were more likely than others to be related to greater student learning gains over time. This could be especially calculated by identifying dimensions or instructional strategies that linked more robustly than did others to teacher participants whose students had made the greatest learning gains (Darling-Hammond, 1999; Goe, 2007; Grossman et al., 2013; Wayne & Youngs, 2003).

The data were also to be analysed for significant bivariate correlations between each of the dimensions of effective practice and positive outcomes for students (whether suggested by higher than anticipated differences in students' learning gains over time or by a decrease in achievement variability over time). It was anticipated that these calculations could lead to some statistically significant correlations between aspects of teacher proficiency and positive outcomes for students (Darling-Hammond & Youngs, 2002; Rivkin et al., 2005). In all calculations of correlation, the level of probability needed to be less than .05 ($p < .05$) and the strength of the correlation coefficient generally needed to be greater than 0.6 if it was to be considered statistically significant.

The data might also be analysed for correlation between selected instructional strategies and positive outcomes for students if a strong relationship between any particular instructional strategy and learner gains appeared to emerge that warranted further testing. The possibility of such a relationship might be signalled through the initial analysis of teacher proficiency data or through classroom observations. However, calculations of correlation between discrete instructional strategies and positive outcomes for students would need to be

approached with caution in that potential for error was strong when attempting to correlate so many variables.

3.6.5. Interpreting the data

Interpreting the data meant developing meta-inferences from the range of data sources that had been created during the study: inferences about learner gains and/or levels of equitable outcomes for learners over time, inferences about teacher participants' levels of operational proficiency in relation to the dimensions of effective practice and some instructional strategies, and inferences from the correlation between levels of operational proficiency, learner gains and levels of equitable outcomes for learners. It subsequently meant synthesising the range of meta-inferences that had been developed by making mega-conclusions about effective literacy practice from them (Creswell & Plano Clark, 2011). In most instances, this meant making conclusions from a synthesis of at least two of the three key data sources. Alton-Lee (2003), in her report to the New Zealand Ministry of Education on quality teaching for diverse learners, describes the "jigsaw puzzle" approach to interpreting data and concludes that "when the 'bits of evidence' are brought together some strong patterns emerge" (p. 13). Interpreting the data in this study meant searching iteratively for strong patterns and trends.

As data were interpreted, it was necessary to inquire continually: Do any particular dimensions and instructional strategies of effective pedagogy (singularly or in combination) appear to be more associated with positive outcomes for Year 5 to 8 learners in writing than other dimensions or strategies appear to be? Do any particular dimensions and instructional strategies (singularly or in combination) appear to be more associated than others with positive outcomes for Year 5 to 8 learners who are most at risk of under-achieving in writing? What do those dimensions and instructional strategies of effective pedagogy (singularly or in combination) that are most strongly associated with greater than expected learner gains or decreased achievement variance actually "look like" operationally?

But, as mentioned previously, there was an ongoing awareness that the foregrounding of any particular dimensions or instructional strategies from the data analysis process had to be undertaken with some degree of caution. It was understood that it would be difficult to consider the operational significance of any dimension or instructional strategy apart from the operation of other dimensions and strategies. As other researchers have suggested, particular pedagogical practices should not be considered in isolation from other practices

within the context of an authentic classroom context. Their level of effectiveness may indeed be contingent on the effective operation of other practices within the same context (Alton-Lee, 2003; Gambrell, Malloy, & Mazzoni, 2007; Hall & Harding, 2003; Parr & Limbrick, 2010). This means (as mentioned in **Chapter 1**) that the apparent significance of any dimension or instructional strategy that emerged from the analysis would need to be considered as a strong possibility or likelihood rather than as a statement of fact.

However, given the carefully selected data sources, any possibilities or likelihoods about effective practice that appeared to emerge from the analysis would warrant being explored in greater depth (Dasu & Johnson, 2003). They would be important components of the search for key pedagogical practices within the concept of effective writing instruction.

Finally, data interpretation would not be complete without illustrations, exemplifications and collaborations from case study material that had been gathered (through observations and interviews) during the study. They would make the statistical analysis "come alive". As cited previously from Johnson & Onwuegbuzie (2004), "Words, pictures and narrative can be used to add meaning to numbers…[and] Numbers can be used to add precision to words, pictures and narratives" (p. 21). Making possibilities or likelihoods from the statistical analysis "come alive" through "words, pictures and narrative" is, in fact, one of the ultimate intents of the study.

3.7. Issues of reliability and validity

A key goal of any research study that aims to identify and describe effective pedagogy is to ensure that a reasonable level of generalisability can be extrapolated from the findings (Creswell & Plano Clark, 2011; Miles & Huberman, 1994; Tashakkori & Teddlie, 1998). Researchers need to ask themselves, as Lincoln & Guba (1985) suggest, whether the findings of their particular inquiry actually "fit".

Within the context of this study, generalisability means being able to transfer findings about effective literacy pedagogy from a specific population (nine effective teachers of writing working with typically performing Year 5 to 8 learners) to a theoretical population (all teachers of writing working with typically performing Year 5 to 8 learners) with a proviso that many teachers may require professional support to make the transfer. Tashakkori & Teddlie (1998) reinforce the importance of generalisability as a key goal of a research study when they suggest that "some degree of generalizability…of *conclusions/inferences* is important to all researchers" (p. 66).

For generalisability to be possible, all conclusions or inferences made in a research study need to be internally and externally reliable and valid. It is essential that what a researcher reports is accurate and credible (Creswell & Plano Clark, 2011). The reader needs to be able to "trust" the findings of a study rather than feel that they merely match the beliefs of the researcher (Miles & Huberman, 1994).

Being assured that all conclusions or inferences made are reliable and valid demands that all data gathered and analysed are reliable and valid, as are the processes or constructs used to gather and analyse the data. Creswell (2008) suggests that conclusions or inferences can be trusted if scores from an instrument (such as the content analysis matrix used in this study) and processes used to gather and analyse the scores "make sense, are meaningful and enable you….to draw good conclusions from the sample" (p. 169).

A range of actions can be employed to strengthen the validity and reliability of research conclusions. These include undertaking a dependability audit of the study (interrogating the robustness and dependability of adopted research methods) and an inferential consistency audit (checking the consistency between the researcher's inferential findings and another rater's findings in relation to the same dataset). They also include requiring participants to "member check" all interim and final research findings for accuracy and interpretation (Lincoln & Guba, 1985; Tashakkori & Teddlie, 1998). All of these actions have been utilised throughout this study so as to enhance its reliability and validity.

As the study was being developed, there was also close and continuous reflection on some of the questions posed by Dellinger & Leech (and colleagues) in their Validation Framework for mixed method research, especially at the analysis and interpretation stages: Do the conclusions and inferences being made link sufficiently to the theory, the research literature, the purpose and the key research questions? How well does the methodology help achieve the purpose of the study? Are the consequences that emerge from the study worthwhile and transferable? (Dellinger & Leech, 2007; Leech et al., 2010). Considering these questions closely helped me (as researcher) to reflect iteratively on the reliability and validity of the study's mixed method construct and its conclusions, and to make changes accordingly. For example, the quantification of qualitative data emerged from a recognition that research questions needed to be answered as precisely as possible (through numeric values) but with rich exemplification from qualitative findings and as likelihoods and possibilities only.

3.7.1. Undertaking a dependability audit

A dependability audit refers to "the process of the inquiry, including the appropriateness of inquiry decisions and methodological shifts" (Tashakkori & Teddlie, 1998, pp. 92–93). This can apply to the appropriateness (or otherwise) of such methodological features as a study's inquiry purpose and key research goals, its approach to participant selection and its processes for gathering, analysing and interpreting data. It can also apply to the coherence (or otherwise) of these (and other) methodological features within the context of the study.

As discussed in **Sections 1.4** and **3.2**, all of these methodological points were considered in relation to studies of a similar nature to this study, both at the outset of the study and during its development. Particular attention was given to studies that had a literacy focus, promoted effective literacy pedagogy, and featured classroom observations and interviews as key data-gathering and analysis tools.

Refer back to **Section 3.2** for a discussion of how methodological decisions made by other researchers influenced the decisions made for this study. Reflecting on and finding strong methodological similarities between this study and a diverse group of related studies strengthened the reliability and validity of conclusions made. Methodological decisions were continually able to be refined and justified by referring to the studies of others. This enhanced the dependability of the study.

Another action planned to strengthen the reliability and validity of the research was to ask two external literacy experts (facilitators from the LPDP project who had not previously worked with the teacher participants) to interrogate the data-gathering and analysis processes or constructs as they were being developed. This meant requesting legitimisation (or otherwise) of the research construct, especially in relation to the purpose and key research goals (Leech et al., 2010). Undertaking this audit with external experts was a preliminary step to ensuring subsequent inter-rater reliability and validity during the anticipated process of analysing the collected data (Cresswell, 2008; Tashakkori & Teddlie, 1998).

A particular action involved the external experts interrogating the set of dimensions and instructional strategies (developed for the content analysis matrix) for accuracy and comprehensiveness. The major debate that ensued related to the matching of particular operational elements with particular dimensions. Each expert linked each strategy with a dimension independently of the other expert and discussed their reasons for each placement

over three meetings we had together. This led to 90.4% total agreement on the placement of strategies (47/52 strategies) and consensus agreement on the placement of remaining strategies. Consensus agreement meant agreement between myself as researcher and one expert, and acknowledgement of the logic of particular placements by the other expert. The experts recognised, just as I had done, that several strategies could be placed under more than one dimension but they sought a priority placement for each strategy according to its apparent pedagogical intent.

The external experts also checked the three-levelled graduating set of descriptors for each instructional strategy for reliability and validity. They had to determine whether the descriptions of graduation allotted to each strategy matched their anticipated descriptions of graduation. Discussions between us led to 100% consensus on this.

They offered no suggested changes to the interview tools and the observation schedule that had been developed. They particularly checked them for coverage of all instructional strategies from the content analysis matrix.

3.7.2. Undertaking an inferential consistency audit

As the study's findings depend strongly on inferences made by the researcher from observation and interview transcripts, undertaking an inferential consistency audit was arguably the most important action taken to strengthen the reliability and validity of its conclusions.

Undertaking an inferential consistency audit means "determining the degree to which the inferences…are consistent with the analysis of obtained data/information" (Tashakkori & Teddlie, 1998, p. 70). It is particularly important that an external reviewer undertakes this audit given that the act of "inferring meaning" requires the researcher to make reference to his or her own knowledge, beliefs and values during the meaning making process (Leech et al., 2010). Using an external reviewer is a means of negating any bias and promoting objectivity of inferential judgments (Creswell, 2008). This is especially important if the researcher holds prior knowledge of the subjects under review, as I did in this study (Miles & Huberman, 1994). One of the external literacy experts acted as external reviewer for this audit.

The reviewer (having become familiar with the data analysis tools and processes through some inter-rater training) independently replicated the processes that I had used when

inferring meaning from sets of teacher participant data. She examined three complete sets of data (principally interview and observation transcripts) and allocated a numeric rating to each of the three teachers in relation to every instructional strategy in the content analysis matrix (just as I had done). Exploring three complete sets of data meant that an in-depth independent audit of one third of teacher participant data for consistency of inferential judgments was undertaken. Two of the three sets were selected purposefully from teachers who I had worked with previously.

It was assumed that inferential judgments could be considered reliable and valid if there was a minimum of 80% consistency between the researcher's and the reviewer's inferences on independent applications of the data analysis process, with this rising to near 100% consistency through discussion (Miles & Huberman, 1994). With both researcher and reviewer using the same numeric scale (0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0), consistency was deemed to be both parties allocating the same or an adjacent rating to a particular teacher for a particular instructional strategy. When issues of inconsistency arose, it was anticipated that negotiation between the researcher and reviewer could generate consensus agreement or understanding of the other's viewpoint.

In relation to the 52 items that both parties independently assessed, there was 92.3% consistency between inferential judgments. This included 38% consistency at an exact level, and 54.3% at an adjacent level. Of the 4 items that generated disagreement, the external reviewer understood and accepted (through discussion) the rationale for making the judgments I had made.

Inconsistency between judgments occurred principally within the dimension of *Self-regulation*. Refer to **Section 6.2** (*Self-regulation*) for further analysis and discussion of possible reasons and consequences of this.

3.7.3. Reliability and validity of learner achievement gain data

Ensuring reliability and validity with regard to what teacher participants do as they gather and analyse learner achievement gain data is also necessary if a study's conclusions are to be trusted. Within the context of this study, this particularly meant ensuring validity of asTTle writing assessment judgments made by teachers. Invalid judgments would negate any links that were made between higher than anticipated learner gains and teacher pedagogy.

Ensuring valid asTTle writing assessment judgments requires external moderation of judgments made by teacher participants (Tashakkori & Teddlie, 1998). With teachers being required to gather and analyse four complete sets of asTTle writing assessment data before and during the study, external moderation of these data was challenging. A "complete set" of data comprised an asTTle writing score (aWs) for each student as well as the script that generated the aWs.

Another of the external experts agreed to act as moderator. She selected and assessed a cross-section of 12 scored scripts from each teacher's first set of data and the same students' scripts from the second set. These were scripts that each teacher had submitted as part of the process for selecting teacher participants. For the teacher's judgments to be valid and reliable, the external moderator was seeking 80 to 90% consistency between her assessment judgments and the teacher's (Miles & Huberman, 1994). Consistency was deemed to be apparent when both parties scored features of a written script (namely, audience, content, structure, language resources, grammar, punctuation and spelling) at the same curriculum sub-level or an adjacent sub-level.

Consistency levels between both sets of judgments ranged from 100 to 66.7%, with the mean consistency level being 85.1%. There was, however, lower than expected consistency between two of the teachers' and the moderator's assessment judgments – one teacher demonstrated a consistency level of 66.7%, and the other a level of 73.8%. Discussion between both parties led to the two teachers recognising that they had scored too harshly by seeking evidence that all criteria at a curriculum sub-level had been demonstrated whereas the other teachers had adopted a "best fit" approach to assessment.

As consistency levels were high between the moderator's and most teachers' judgments, suggesting that most teachers' judgments were reliable and valid, it was decided that moderation of their third and fourth sets of data was not necessary. Ongoing moderation discussions were held however with the two teachers who had demonstrated lower levels of consistency. This resulted in no changes being made to their assessment judgments of the third and fourth sets of data.

3.7.4. Other approaches to promoting reliability and validity

Another planned action was implemented so as to strengthen the reliability and validity of the study's conclusions. It involved the process of member checking. Member checking—requesting participants to check inferences and conclusions made by the researcher for

perceptual errors—is described by Tashakkori & Teddlie (1998) as constituting "the most important credibility check" (p. 92). Member checking can also be as simple as requesting participants to check transcripts for accuracy (Brenner, 2006, p. 368).

Teacher participants in this study were sent and requested to check all teacher interview and lesson observation transcripts for accuracy. No teachers made significant changes to transcripts, though some added learner comments that both the transcriber and I had found inaudible in the lesson observation transcripts. Teachers were also sent a set of initial conclusions from data analysis but no discussion of inferences and conclusions ensued. Instead, teachers commented on the usefulness of the conclusions for their professional learning. This suggested that teacher participants agreed (albeit tacitly) with the inferences and conclusions made in the study, so strengthening their reliability and validity.

Chapter 4: Identifying some key dimensions of effective practice

4.1. An overview of the chapter

The quantitative results presented in this chapter identify those features of teachers' instructional practices that are most likely to generate positive outcomes in writing for Year 5 to 8 learners. This is a prelude to describing them in **Chapters 5, 6 and 7**.

The first section indicates progress made by students in each teacher participant's classroom through analysis of their T1 and T2 asTTle writing data. As such, it is a primary indicator of teacher effectiveness against which levels of operational proficiency can be considered.

The subsequent sections indicate the level of operational proficiency demonstrated by teachers (as a participant set and by each individual teacher participant) through analysis of the observational and interview data. This information is used to suggest points of association (including correlation) between and across dimensions of effective practice, either as single or related variables.

The findings are reported, however, within the previously discussed proviso that results based on authentic classroom interactions cannot be considered in isolation. Although the quantitative results that are reported and discussed in this chapter may signal particular dimensions as significant features of teacher effectiveness, they may only be significant given their inter-relationship with other features. **Chapter 2** of this study concluded that effective writing instruction is principally contingent on the strategic and proficient implementation of eight inter-related dimensions of effective practice—the results reported in this chapter suggest which of those dimensions might warrant closer investigation in the search for features of instruction that are particularly effective.

4.2. An analysis of students' progress

Ascertaining the degree of progress made by students was achieved by testing whether (and by how much) their mean actual gains exceeded the mean anticipated gains (specified in the asTTle manual) of 20 asTTle writing score (aWs) points for Year 5 students, 36 points for Year 6 students, 14 points for Year 7 students and 13 points for Year 8 students over a 12-month data-collecting period (University of Auckland, 2005b, p. 25). Hereafter the

difference between students' actual gains and their anticipated gains is referred to as students' "additional gains".

4.2.1. Progress achieved by all students

As expected (because of the exceptional nature of the teacher participants), students in all classrooms made considerable progress as developing writers during the March to November data-collecting period. The mean of additional gains made by "all students" as a cohort in each classroom ranged from 162.6 aWs points (Classroom 5) to 23.1 points (Classroom 9), with the mean additional gain for all classrooms being 63.9 points. Classroom 5 could be regarded as an outlier in that students in that class had a mean additional gain that was 81.9 aWs points higher than the mean additional gain made by students in any other class in the study. Refer to Table 2 for a summary of mean additional gains made by "all students" in each teacher participant's classroom.

Table 2: All students' additional gains T1–T2

Classroom	***n***	**Mean of additional gain T1–T2**	***SD***	**Gain**	
				Min	**Max**
1	21	40.4	50.62	-58.00	116.00
2	27	59.0	59.77	-80.00	205.00
3	22	38.0	28.58	-14.00	84.00
4	21	77.0	45.32	-11.00	179.00
5	24	162.6	76.16	24.00	304.00
6	19	64.5	43.22	-18.00	160.00
7	30	30.1	42.79	-17.00	152.00
8	26	80.7	21.11	37.00	123.00
9	21	23.1	96.69	-153.00	264.00

4.2.2. Progress achieved by gender

Female students made greater gains than did male students in six (out of nine) classrooms. However, in three classrooms male students made gains at least as good as female students' gains. Although the mean additional gain for "all males" in these classrooms was 66.7 aWs points, compared with a mean additional gain of 59.1 points for "all females", the difference of 7.6 is within the level of error (13 to 14 points) attributed to the asTTle tool. Two of the three classrooms in which male students made gains as least as good as female students' gains were the two classrooms in which "all students" made the greatest overall gains between T1 and T2 (Classrooms 5 and 8). Refer to Table 3 for a summary of mean additional gains made by male and female students in each teacher participant's classroom.

Table 3: Students' additional gains (Male/Female) T1–T2

Classroom	*n*	Mean of additional gain T1–T2	Gain		
			SD	**Min**	**Max**
1 – Male	9	14.22	39.31	-43.0	67.0
1 – Female	12	60.08	50.52	-58.0	116.0
2 – Male	13	54.23	59.21	-12.0	205.0
2 – Female	14	63.36	62.18	-80.0	173.0
3 – Male	11	33.09	24.7	-12.0	74.0
3 – Female	11	42.9	32.44	-14.0	84.0
4 – Male	13	76.23	38.77	32.0	173.0
4 – Female	8	78.5	57.34	-11.0	179.0
5 – Male	14	184.36	62.67	95.0	289.0
5 – Female	10	132.2	85.95	24.0	304.0
6 – Male	7	62.7	53.22	-18.0	152.0
6 – Female	12	65.5	38.84	-6.0	160.0
7 – Male	13	28.0	50.7	-14.0	152.0
7 – Female	17	31.65	37.22	-17.0	149.0
8 – Male	12	87.5	20.83	57.0	123.0
8 – Female	14	74.79	20.24	37.0	102.0
9 – Male	11	59.73	106.38	-153.0	264.0
9 – Female	10	-17.2	68.97	-119.0	81.0

When growth over time by an under-achieving cohort (such as some of the male students in this study) is analysed, however, the phenomenon of regression to the mean can offer an explanation of the gains (Trochim & Donnelly, 2007).

4.2.3. Progress achieved by under-achieving students

When considered as a cohort, under-achieving students (namely, those whose achievement at T1 placed them within the lowest quartile of achievement in their class) made significantly greater learning gains than the cohort of "all students" in each teacher participant's classroom. The mean additional gain for the under-achieving cohort across classes (n = 51) was 105.56 aWs points (compared to 63.9 points for the cohort of "all students"). Again, Classroom 5 could be considered as an outlier in this dataset: under-achieving students in that class achieved a mean additional gain that was 141.38 aWs points greater than the equivalent gain in any other class. Under-achieving students were, in fact, separated (as cohorts) from each other in all other classrooms by a mean additional gain of just 14.2 points. Again, however, the phenomenon of regression to the mean should be considered when analysing and interpreting learning gains made over time by an under-

achieving cohort. Refer to Table 4 for a summary of additional mean gains made by under-achieving students in each teacher participant's classroom.

Table 4: Under-achieving students' additional gains T1–T2

Classroom	*n*	Mean of additional gain T1–T2	*SD*	Gain	
				Min	Max
1	5	38.3	57.59	-58.0	116.0
2	7	89.2	63.78	11.0	205.0
3	5	37.0	36.77	11.0	63.0
4	5	81.1	56.53	-11.0	179.0
5	6	236.4	60.85	120.0	304.0
6	5	107.4	45.81	50.0	160.0
7	7	73.0	65.96	-4.0	152.0
8	6	95.0	16.55	69.0	123.0
9	5	178.0	121.62	87.0	264.0

A corollary of the under-achieving student cohort making accelerated gains was that the level of variance in students' additional gain data decreased in most classrooms (six out of nine), as indicated by a reduction in the standard deviation in these rooms over time (Classrooms 2, 5, 6, 7, 8, 9). Refer to Table 5 for an overview of the change in standard deviation for "all students" in each classroom between T1 and T2.

Table 5: Change in standard deviation for all students T1–T2

Classroom	*n*	Mean of additional gain T1	*SD* T1	Mean of additional gain T2	*SD* T2	Difference between T1 and T2 *SD*
1	21	-19.9	83.4	20.6	90.7	+7.3
2	27	-24.3	67.4	34.6	64.9	-2.5
3	22	19.3	52.3	57.3	58.5	+6.2
4	21	-55.6	77.6	21.5	85.2	+7.6
5	24	-24.7	84.7	138.0	53.6	-31.1
6	19	-19.7	63.3	44.8	56.0	-7.3
7	30	48.4	106.1	78.5	100.0	-6.1
8	26	-17.6	75.2	63.0	65.4	-9.8
9	21	29.0	93.0	52.1	72.9	-20.1

This ranged from a standard deviation decrease of 31.1 aWs points (Classroom 5) to 2.5 aWs points (Classroom 2), with the mean decrease being 12.8 aWs points. A lessening of the standard deviation, in combination with accelerated gains, suggested that lower achieving students made greater gains than did higher achieving students in these six

classrooms. For example, the quartile of lowest ranked students in Classroom 6 at T1 (n = 5) made a mean additional gain between T1 and T2 that was 46.0 aWs points more than the gain of the quartile of highest ranked students (n = 5) in the same class. This pattern of differentiated achievement was evident (to varying degrees) in all classrooms where the level of standard deviation decreased between T1 and T2.

But there is some evidence that the greater acceleration of lower achieving students did not significantly disadvantage higher achieving students in these six classrooms. The higher achieving cohort in each class achieved an actual or raw mean asTTle writing score in T2 that was considerably above the anticipated score for their year cohort, despite the fact that they had made considerably less progress than the lower achieving cohort had made. For example, the quartile of highest ranked students in Classroom 6 achieved a mean actual score of 642 at T2, whereas the lowest ranked quartile in the same class achieved a mean actual score of 533. Both scores are higher than the expected score of 518 points (University of Auckland, 2005b) but the score for the highest ranked students is considerably higher. There was, however, a slight increase of the standard deviation in three classrooms (Classrooms 1, 3, 4).

Whether in a classroom in which the level of standard deviation increased or decreased, most students in each class made substantial learning gains over time. Many students (85.1%) made additional gains over and above anticipated progress between T1 and T2 and these ranged from an addition of 3 points to 304 points. Even in the three classrooms where higher achieving students seemed to make slightly greater gains than lower achieving students made, the lower achieving students made substantial learning gains.

4.3. An analysis of teacher participant data: Some introductory points

Before the degree of progress that students made was analysed, a series of other analyses were undertaken to identify the features of teacher participants' literacy teaching practice (particularly the dimensions of effective practice) that were demonstrated at high levels of operational proficiency. As discussed in **Chapter 3** (p. 78), analyses of teaching practice data were undertaken before analyses of learner gain data so as to ensure that judgments about teacher proficiency were made objectively from observation and interview data and apart from the possible bias of student achievement data.

Identifying the features of teacher participants' literacy teaching practice considered to be effective was a preliminary step to determining associations between them. It was also a

preliminary step to investigating them in greater detail in subsequent chapters and describing what they looked like in practice.

4.3.1. An overview of dimensions of effective practice data

This section summarises findings about the dimensions (and combinations of dimensions) that appear to be most closely associated with generating positive outcomes for learners, according to statistical analysis. Findings are suggested principally through measures of central tendency, variability and correlation for each dimension of effective practice and for each teacher participant, both as complete and discrete datasets.

4.3.1.1. Dimensions of effective practice: operational proficiency levels

The proficiency levels for all dimensions of effective practice are relatively high. Refer to Table 6 for a summary of the measures of central tendency and some measures of variability calculated for the dimensions of effective practice in relation to data from "all teachers".

Table 6: Operational proficiency levels for dimensions of effective practice

Dimension	**Teachers (*n*)**	***M***	***SD***	**Median**	**Mode**	**Range**
Task Setting	9	5.11	0.74	5.0	5.0	4.0
Direct Instruction	9	5.54	0.61	6.0	6.0	4.0
Responding to Students	9	5.28	0.49	5.0	5.0	5.0
Engaging Students	9	5.0	0.56	5.0	5.0	5.0
Organisation/Management	9	5.48	0.46	6.0	5.0	5.0
Expectations	9	4.6	0.67	5.0	5.0	5.0
Self-regulation	9	3.87	0.85	4.0	2.0	5.0
Goal Setting	9	5.07	0.61	5.0	5.0	5.0

Using the previously described 7-point scale (with 1 representing *basic* and 7 representing *exemplary*) to calculate the overall mean of summed scores for each dimension, the overall mean for all dimensions exceeded the midway point (3.5) of implied proficiency. Such a finding was, in fact, anticipated because of the exceptional nature of the teacher cohort that participated in the study.

Analysis of data in Table 6 also indicated little difference between most of the measures of central tendency and variability for most of the eight dimensions. Although it is possible to rank the dimensions from the mean of summed scores (with *Direct Instruction* receiving the highest ranking and *Self-regulation* receiving the lowest), the difference between the six dimensions with the highest means was minimal (0.54), with a score difference of just 0.06

between the top and second ranked dimensions, 0.26 between the top and third ranked dimensions, and 0.43 between the top and fourth ranked dimensions.

There was, however, one dimension (*Self-regulation*) that scored noticeably lower than the other dimensions. The score difference between it and the dimension ranked one above (*Expectations*) was 0.73 which was reasonably close to the score difference between the top and seventh dimensions (0.94).

4.3.1.2. Teacher participants: Operational proficiency levels

A minimal difference between each teacher participant's overall level of operational proficiency was also noted (refer to Table 7). For this finding, overall scores for each teacher were calculated from the mean of summed scores within each dimension of effective practice.

Table 7: Operational proficiency scores for teacher participants

Teacher	Mean of summed scores for all dimensions
1	4.85
2	5.22
3	4.66
4	4.55
5	5.7
6	5.33
7	4.48
8	5.58
9	5.15

On the scale of 0 to 7, the score difference (1.22) between the top ranked teacher (Teacher 5) and the bottom ranked teacher (Teacher 7) was relatively low, and the mean score difference between all teachers was just 0.15. These findings were again anticipated because of the exceptional nature of the teacher participant cohort.

A relatively strong association (77.7%) between teacher proficiency and learner gains also emerged from the data. Rankings of teacher proficiency scores in Table 7 were aligned with rankings of learner gains from Table 2. The association was deemed to be strong when the ranking between both sets was equal or adjacent. As examples of strong association, the teacher whose students achieved significantly more progress than students in any other room (Teacher 5) had the highest operational proficiency score from observation and

interview data, the teacher whose students achieved the second highest degree of progress (Teacher 8) had the second highest score, and the teacher whose students achieved the fourth highest degree of progress (Teacher 6) had the third highest score.

This strong level of association was not, however, fully consistent. Two marked exceptions were the teachers whose students achieved the third highest degree of progress (Teacher 4) and the least progress (Teacher 9). Teacher 4 had the eighth ranked score from observation and interview data and Teacher 9 had the median score. Nevertheless, the standard deviation in the mean of students' additional learning gain scores in Classroom 9 decreased over time more than in almost all other classrooms.

4.3.1.3. Teacher proficiency levels: Points of variation

There was minimal difference between proficiency scores gained by most teachers for most dimensions of effective practice. By ranking scores gained by all teachers for all dimensions on the 7-point scale (refer to Table 8) and ascertaining the difference between top and bottom scores for each dimension, there was an overall mean difference of 2.02 between the top and bottom ranked score for "all dimensions". This included a difference of 2.0 or less for five (out of eight) dimensions.

Table 8: Ranking of proficiency scores gained by teacher participants for each dimension

Dimension	**Teachers' proficiency scores (in descending order)**
Task Setting	6.0, 6.0, 6.0, 5.6, 5.5, 5.0, 4.8, 4.6, 3.8
Direct Instruction	6.1, 6.0, 6.0, 5.7, 5.7, 5.7, 5.4, 4.7, 4.3
Responding to Students	6.0, 5.5, 5.5, 5.4, 5.3, 4.8, 4.7, 4.7, 4.7
Engaging Students	5.9, 5.6, 5.4, 5.1, 4.9, 4.9, 4.6, 4.4, 4.1
Organisation/Management	6.0, 5.9, 5.7, 5.6, 5.6, 5.6, 5.6, 5.4, 4.4
Expectations	6.0, 5.0, 5.0, 4.6, 4.6, 4.2, 4.2, 4.0, 3.0
Self-regulation	5.4, 5.3, 4.1, 4.0, 3.8, 3.3, 3.3, 2.9, 2.7
Goal Setting	6.0, 5.6, 5.4, 5.2, 5.2, 5.0, 4.8, 4.4, 4.0

There was, however, a greater difference than the mean difference (2.02) for three dimensions: *Task Setting* (2.2), *Expectations* (3.0) and *Self-regulation* (2.7). With regard to *Self-regulation*, the difference between the two top ranked scores and the other scores (1.2) was at least three times greater than the equivalent difference for all other dimensions.

In addition, there was a range of teacher participants whose scores were consistently amongst the two top ranked scores for a dimension (see Table 9). The variation of teacher numbers for some dimensions in Table 9 is explained by the fact that multiple teachers sometimes achieved the same score.

Table 9: Top scoring teacher participants for each dimension

Dimension	**Teachers (in descending order of proficiency)**
Task Setting	Teacher 8; Teacher 6; Teacher 5....
Direct Instruction	Teacher 8; Teacher 6; Teacher 2....
Responding to Students	Teacher 5; Teacher 6; Teacher 8....
Engaging Students	Teacher 6; Teacher 8....
Organisation/Management	Teacher 7; Teacher 5....
Expectations	Teacher 5; Teacher 9; Teacher 2....
Self-regulation	Teacher 5; Teacher 8....
Goal Setting	Teacher 8; Teacher 2....

Four teacher participants (Teachers 2, 5, 6, 8) featured prominently amongst the two top ranked scores. They featured amongst the two top ranked scores for at least three dimensions, whereas other teachers featured in no more than one dimension. As noted from Table 2, Teachers 2, 5, 6 and 8 were also amongst the teacher participants whose students made the greatest learner gains over time. For example, Teacher 5 (whose students made the highest degree of learning gains over time) featured amongst the top two ranked scores for five (out of eight) dimensions, and Teacher 8 (whose students made the second highest degree of learning gains) featured amongst the top two ranked scores for six dimensions.

This supports the finding of an association between teacher proficiency and learner gains in the study that was reported previously (p. 97). Teachers 5 and 8 were also the teachers who scored significantly higher than others' scores for the dimension (*Self-regulation*) with the greatest gap between the two top scores and other scores.

4.3.1.4. Dimensions of effective practice: Some correlations

There is a statistically significant correlation (using Spearman's rho) between student learning gains and two dimensions of effective practice: *Learning Tasks* and *Direct Instruction*. Similarly, there is a statistically significant correlation between teacher participants' capacity to reduce the level of achievement variance in their classrooms and

three dimensions: *Responding to Students, Organisation and Management* and *Self-regulation*. Refer to Table 10 for an overview of these correlations.

Table 10: Correlations between dimensions of effective practice and student learning gains/Decrease in achievement variance

Dimension	**Learner gains in relation to expected gains**	**Decrease in achievement variance**
Task Setting		
Correlation Coefficient	.734	-.228
Sig. (2-tailed)	.024 *	.555
N	9	9
Direct Instruction		
Correlation Coefficient	.672	-.170
Sig. (2-tailed)	.047 *	.661
N	9	9
Responding to students		
Correlation Coefficient	.483	-.794
Sig. (2-tailed)	.188	.011 *
N	9	9
Engaging Students		
Correlation Coefficient	.168	-.563
Sig. (2-tailed)	.666	.114
N	9	9
Organisation/Management		
Correlation Coefficient	-.237	-.763
Sig. (2-tailed)	.539	.017 *
N	9	9
Expectations		
Correlation Coefficient	.160	-.641
Sig. (2-tailed)	.680	.063
N	9	9
Self-regulation		
Correlation Coefficient	.395	-.678
Sig. (2-tailed)	.295	.045 *
N	9	9
Goal Setting		
Correlation Coefficient	.603	-.167
Sig. (2-tailed)	.086	.667
N	9	9

Notes. *Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

This set of correlations suggests that teachers with high levels of operational proficiency within the dimensions of *Learning Tasks* or *Direct Instruction* are somewhat likely to have student achievement levels in their classroom which increase markedly over time. It also

suggests that if teachers demonstrate high levels of operational proficiency within the dimensions of *Self-regulation*, *Responding to Students* or *Organisation and Management*, it is somewhat likely that the level of achievement variance in their classroom will reduce over time. There is no statistically significant correlation, however, between either student learning gains or a decrease in variance and three dimensions of effective practice: *Student Engagement and Challenge*, *Expectations* or *Learning Goals*. This suggests that performance around these dimensions does not differentiate amongst these exceptional practitioners.

There is, however, less evidence of a statistically significant correlation between combinations of effective practice dimensions. Refer to Table 11 for an overview of dimensions of effective practice which correlate significantly with one another.

Table 11: Inter-correlation of dimensions of effective practice

	Learning Tasks	Direct Instruction	Responding to Students	Engaging Students	Organisation	Expectations	Self-regulation	Goal Setting
Learning Tasks	—	.858 .003 **	.384 .307	.557 .119	-.318 .405	.286 .455	.483 .188	.754 .019 *
Direct Instruction	.853 .003**	—	.291 .448	.592 .093	-.173 .656	.250 .516	.449 .226	.761 .017 *
Responding to Students	.384 .307	.291 .448	—	.339 .372	.491 .179	.306 .424	.390 .300	.078 .842
Engaging Students	.557 .119	.592 .093	.339 .372	—	.256 .505	.409 .275	.511 .160	.726 .027 *
Organisation	-.318 .405	-.173 .656	.491 .179	.256 .505	—	.283 .460	.238 .537	-.255 .507
Expectations	.286 .455	.250 .516	.306 .424	.409 .275	.283 .460	—	.924 .000 **	.335 .379
Self-regulation	.483 .188	.449 .226	.390 .300	.511 .160	.238 .537	.924 .000**	—	.559 .118
Goal Setting	.754 .019*	.761 .017*	.078 .842	.726 .027*	-.255 .507	.335 .379	.559 .118	—

Notes. *Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Again using Spearman's rho for all dimensions of effective practice, there is a statistically significant inter-correlation between just a small percentage (7.8%) of all correlative possibilities. There are varying (but few) degrees of correlation between proficiency in *Learning Goals*, *Learning Tasks*, *Self-regulation*, *Direct Instruction*, *Expectations* and *Student Engagement and Challenge*, but there is no correlation between proficiency in *Responding to Students* or *Organisation and Management* and other dimensions. Correlation between dimensions means that if, for example, participating teachers score high levels of operational proficiency for the dimension of *Self-regulation* then it is somewhat likely that they will score highly for *Expectations*. If teachers score highly for *Learning Tasks*, then it is also somewhat likely that they will score highly for *Learning Goals* and *Direct Instruction*.

4.4. Some conclusions about dimensions of effective literacy practice

A synthesis of the quantitative data presented in **Sections 4.2** and **4.3** generates a range of conclusions. They principally relate to inter-connections between teacher proficiency levels and learner gains over time and suggest several areas for further investigation.

As anticipated, because of the exceptional nature of the teacher cohort that participated in the study, students in all classrooms made considerable learning gains. Against the expectation (outlined on page 91) that they would progress by a mean of 20.8 aWs points during the data-collecting period, they exceeded expected average progress by a mean of 63.9 points. In addition, the level of achievement variance decreased in most classrooms over time. With a small degree of variation, the advance in learning gains and the decrease in achievement variance applied to all students, and to the discrete cohorts of student participants, namely boys and low-achieving students.

Also as anticipated, because of the exceptional nature of the teacher cohort, all teachers' overall proficiency levels were relatively high. Using a 7-point scale, the mean operational proficiency level for "all dimensions" was 5.06 and there was a difference of just 1.22 between the top and bottom ranked teachers. As a corollary to this, teachers' operational proficiency levels for each dimension of effective practice were also relatively high. Using the same 7-point scale, the mean operational proficiency score was 5.0 for all dimensions, with a difference of 1.67 between the top and bottom ranked dimensions.

These findings reinforce the notion that an exceptional cohort of teacher participants had indeed been selected for the study and that their practice was indeed effective. Having

concluded in **Chapter 2** that strategic and proficient implementation of all dimensions of effective practice (in combination with each other) is necessary for generating higher than anticipated learner gains, the findings also suggest some confirmation of this. This is particularly indicated by a reasonably strong alignment between consistently high teacher proficiency levels within and across all dimensions and greater than expected learner gains for all students, including students who are most at risk of under-achieving.

But the data also signal some variations from the above findings which can be regarded as points requiring further and deeper interrogation in subsequent chapters. These relate particularly to operational variation between some dimensions of effective practice and between some aspects of teachers' proficiency.

Interrogating further and deeper into the points of variation will especially involve analysing two broad areas in greater depth. The operational detail of dimensions that correlate significantly with learner gains (*Learning Tasks*, *Direct Instruction*) or decreased achievement variance (*Self-regulation*, *Responding to Students*, *Organisation and Management*) will need to be explored further. The operational detail around *Self-regulation* will particularly warrant further investigation as *Self-regulation* is the dimension with the greatest degree of operational variability. In addition, the pedagogical actions of those teacher participants who generated greater learning gains for their students than other teachers did or who scored consistently higher than others for some dimensions of effective practice (especially *Learning Tasks, Responding to Students* and *Self-regulation*) will need to be explored further.

These points of further investigation have been suggested by quantitative data. They will subsequently need to be explored through qualitative analysis so as to illustrate and exemplify (through classroom practice examples) the strength of their association with positive outcomes for learners.

It is recognised (see **Chapter 2**) that operational proficiency in all dimensions of effective practice is required for teachers to generate greater than anticipated learner gains, but analysis of quantitative data in this study suggests that some dimensions may be more influential than others. As such, they may be regarded as *foreground dimensions.* But as foreground dimensions, they must be regarded as possibilities or likelihoods only. Their effectiveness within authentic classroom contexts will always be contingent (as previously discussed) on their association with other dimensions. But, as possibilities and likelihoods, it

will still be important and useful to investigate and describe classroom operations associated with them.

It is also recognised that although the practice of all teacher participants in this study is effective, quantitative data suggests that some teachers may be more effective than others within the context of the study. This, again, is contingent on the classroom contexts in which particular teachers are situated. Hence there is a need to explore the pedagogical detail of those classroom contexts as closely as possible in the next chapters, especially in cases where there is considerable operational variability between these exceptional practitioners.

Chapters 5 to **7** are organised around the eight dimensions of effective practice, especially their association with learner gains and decreased achievement variance. Classroom practice associated with all dimensions will be explored in depth, but (for reasons discussed above) greater emphasis will be placed on those dimensions that appear to be most strongly associated with learner gains and a decrease in achievement variance as well as those teacher participants who appear to have made the greatest impact on student achievement.

Chapter 5: Investigating and operationalising the dimensions of effective practice that correlate with learner gains

5.1. An overview of the chapter

Quantitative summaries of the dimensions of effective practice need to be investigated further for classroom-based evidence of their actual importance as features of effective literacy practice. They also need to "come alive" if their levels of effectiveness are to be clearly understood. This means contextualising them within natural and authentic teaching and learning settings that are enacted by real teachers and learners, such as those participating in this study. Alton-Lee (2003), in the introduction to her report on quality teaching for diverse learners, states that "it is with the rich detail of cases...that the complexities of the learning processes and impact of effective pedagogy can be traced in context, in ways that teachers can understand implications for their practice" (p. 13).

The purpose of this chapter is to provide "the rich detail of cases" by illustrating and exemplifying those dimensions of effective practice that appear (from quantitative evidence) to be strongly associated with learner gains in writing. This particularly means describing key pedagogical practices associated with *Learning Tasks* and *Direct Instruction*. Developing these descriptions directly addresses the key research goal that frames the study, namely, to not only identify but also *describe* the nature of those features of teachers' instructional practices that are most likely to generate positive outcomes in writing for Year 5 to 8 learners.

As the features most closely associated with learner gains are particularly evident in the classrooms where students made the greatest gains in writing achievement (especially in Classrooms 5, 6 and 8), teaching and learning episodes as well as accompanying commentaries from these classrooms will be the principal cases in this chapter (and the next two). These are also the teachers who achieved the highest operational proficiency scores across "all dimensions". It will be particularly useful to explore what differentiates them operationally from other exceptional teachers.

There appear to be no professional background links between the teachers in these three rooms. Nor do they appear to have different professional backgrounds from other teachers in the study. This suggests that similarities in teachers' professional backgrounds are

probably not significant as indicators of teacher proficiency. The teachers in these rooms teach a range of class levels (from Year 5 to Year 8) in a range of school types (contributing, full primary, intermediate) and within a range of socio-economic communities (low, medium, high). They hold similar teaching qualifications but range from being very experienced (19 years' teaching) to somewhat experienced (four years). All three teachers have undertaken extensive professional learning in literacy (through LPDP) within two years of the data-gathering period, but so have most teacher participants in the study. The only reliable points of association between them relate to some of the instructional strategies that they demonstrate at an exemplary level, as will be reported throughout this chapter and the next two.

However, as all teacher participants in the study are regarded as exceptional (to varying degrees), teaching and learning episodes as well as accompanying commentaries from all teachers and classrooms will be featured in these chapters.

5.2. Learning tasks

As signalled in **Chapter 4**, there appears to be a strong association between the content and organisation of the learning tasks that teacher participants establish for and implement with their students and teachers' capacity to generate positive outcomes for their students in writing. This finding aligns with the conclusion reached by many researchers (as reported in **Section 2.4.3**) that strong attention to task orientation is necessary for writing instruction to be effective (Ames, 1992; Black & Wiliam, 1998; Blumenfeld, 1992; Gibbs & Poskitt, 2010).

Because of the statistically significant correlation between task orientation and learner gains, it was decided to investigate whether any particular instructional strategies within the *Learning Tasks* dimension appeared to correlate significantly with learner gains or decreased achievement variance over time. The process and risks (because of potential for error) related to making multiple correlational calculations are discussed in **Chapter 3** (p. 82). Calculations indicated significant correlation between two (from five) strategies and learner gains. They are teachers' capacity to "devise learning tasks that students can identify as purposeful" ($r_s = .76$, $p < .05$) and their capacity to "involve students in the selection or construction of learning tasks" ($r_s = .68$, $p < .05$). This suggests (albeit tentatively) that these instructional strategies are potentially important aspects of being an effective teacher of writing.

5.2.1. An overview of teacher participant proficiency and variability

Most teacher participants appeared to be able to implement most task-oriented concepts (outlined in **Section 2.4.3**) strategically and proficiently. Analysis of lesson observation data and subsequent interview data (with both teachers and students) supported this conclusion. Table 12 indicates measures of central tendency calculated for "all teachers" (on a 7-point scale) in relation to the five instructional strategies in the *Learning Tasks* dimension.

Table 12: Learning task instructional strategies

Instructional strategy	*M*	*SD*	Median	Mode	Range
Selects tasks that match students' learning needs	5.67	0.87	5.0	5.0	2.0
Selects open-ended tasks that can be taken over extended time period	4.89	1.17	5.0	5.0	3.0
Selects tasks that students can identify as purposeful	5.89	0.86	6.0	7.0	2.0
Involves students in selecting and/or constructing tasks	3.89	1.36	3.0	3.0	4.0
Takes account of students' diverse backgrounds when selecting tasks	5.22	0.66	5.0	5.0	2.0

The average mean score for all five strategies is 5.11, giving it median placement in the ranked list of all dimensions of effective practice. The mean for one strategy ("selects tasks that students can identify as purposeful") is considerably above the average mean and the mean for one other ("involves students in selecting and/or constructing tasks") is considerably below. It is important to recall that there is a statistically significant correlation between each of these two strategies (but no other strategies) and student learning gains over time.

The data cited above also indicate that although there is reasonable homogeneity amongst teachers with regard to their high level of capacity to select or construct learning tasks that are purposeful for students and link directly to their needs and backgrounds, there is more variability in their capacity to involve students in the selection or construction of learning tasks. Teachers 5 and 8 (whose data indicated the strongest alignment of high teacher proficiency and greater than expected learner gains) demonstrated considerably greater proficiency around this instructional strategy than did any other teacher. On a 7-point scale, the average of their mean scores for this strategy was 6.5 whereas it was 3.43 for all other teacher participants.

The three teacher participants whose students made the greatest learner gains over time (Teachers 5, 6, 8) scored amongst the highest levels of operational proficiency for the dimension of *Learning Tasks*. Only one other teacher (Teacher 1) scored at a similar level. Table 13 indicates the mean of each teacher participant's summed proficiency level for all *Learning Task* instructional strategies.

Table 13: Teacher participants' proficiency levels related to learning task items

Teacher	Mean summed score for all instructional strategies
1	5.60
2	5.0
3	4.60
4	4.80
5	5.60
6	6.0
7	3.80
8	6.0
9	4.60

In summary, all of the *Learning Task* data suggest particular strengths by teacher participants in ensuring that learning tasks selected or constructed are purposeful for students and link directly to their needs and backgrounds. But they also suggest variability in teachers' capacity to involve students in the selection or construction of learning tasks. Because of the importance of these instructional strategies as features of effective writing instruction (refer to research references in **Section 2.4.3**), it may be that lifting their capacity to involve students in selecting or constructing writing tasks is an instructional strategy requiring attention by some teachers.

The remainder of this section discusses and illustrates issues pertaining to the content and organisation of the *Learning Task* dimension that this exceptional cohort of teacher participants developed and utilised.

5.2.2. Task content

Eight out of nine teacher participants scored highly (above the midway point) on a 7-point scale for selecting or constructing learning tasks that are purposeful and motivating for their students in terms of content. In addition, all teachers scored highly at selecting or constructing tasks with content that match their students' identified learning needs and is appropriate for their students' diverse backgrounds. This finding is consistent with the

importance that researchers attribute to "task meaningfulness" as a key component of effective learning practice (Ames, 1992; Blumenfeld, 1992; Lodewyk & Winne, 2005; Paris & Winograd, 1990; Wigfield & Eccles, 1992).

Student participants were required to write on a wide selection of topics for a range of writing purposes in the lessons observed during the study (n = 31). The focus of two observed lessons, however, was on building writing skills (such as inserting dialogue punctuation into texts and re-crafting texts for impact) rather than writing about a particular topic.

During many observed lessons, students were required to write from their personal experiences (n = 13). Topics ranged from recounting a life episode that was "naughty", to describing "a feature of the environment that is important" to the writer, to recounting an "accident" or a "scary moment" that the writer had experienced, to instructing readers how to cook the writer's "favourite meal at camp", to persuading readers (from personal experience) that "boys are better than girls at sport". Students in some other lessons (n = 8) were required to write from their imaginations. These topics ranged from describing an "imaginary moment" (inspired from a set of photographs), to recounting the "possible ending" of an imaginary legend, to persuading readers that "Goldilocks should not have entered the three bears' house". Students in some other lessons (n = 8) were required to write from their knowledge of science, social science or technology topics. This included explaining "how the heart or brain functions" and explaining "the impact of methamphetamine on drug users". These two factual topics were linked to ongoing science units that students were undertaking.

All teacher participants, to varying degrees of depth, could articulate their purpose for selecting particular writing topics, and they could discuss how particular topics related to their students' experiences, interests or content knowledge-base. As such, they could justify their selection of topics as "being purposeful".

Teacher 5, for example, required his/her[1] students to write a descriptive text about a controversial school decision (chopping down a prominent tree in the school playground) because "we all have strong feelings about it". The teacher suggested that teachers and students "have to seize the moment…because topic is so essential…I find the best writing is

[1] Note: To maintain anonymity, the gender of teacher participants is not disclosed, hence his/her and s/he will be used throughout.

the writing that's, you know, got real purpose". S/he explained that s/he does not have a rigorous long-term plan of topics for writing "because that would not allow us, as a class, to go off and write on the things that we want to write about…[Topics] will arise according to kids' experiences, and needs, and interests and everything like that".

Teacher 6, when analysing why a writing lesson on a "scary moment" had been particularly successful with a small group of under-achieving boys, decided that it was because "the topic was, and indeed had to be, something everyone could relate to". The teacher explained, "We realised everyone had something in common. We'd all related to that first time we jumped off something really high into water."

Both of these teachers implied that particular writing lessons had been effective mainly because they were purposeful for students. As summarised by Teacher 5 in a post-observation interview:

> *Having something to say…something to write about…is of paramount importance to me as a teacher of writing…Like a while back we all got incensed because of some tagging near the school so we decided to write to the local paper…venting our anger like and persuading people how bad tagging is.*

Teacher participants could also articulate, to varying degrees of depth, an awareness of the need to engage and motivate students in instructional writing activities through topic selection. Two teachers, for example, suggested that purposeful and strategic topic selection had generated stronger engagement by many of their male students than was apparent during previous instructional lessons. When analysing the effectiveness of a lesson taught on "being naughty", Teacher 1 discussed how the most reluctant writers in the class were boys and hence the teacher had selected a writing topic that was going to "engage the boys…What I wanted to do was choose something that was going to capture, I thought, the boys". When asked to discuss why the lesson was effective, s/he stated that it was because "I tried to choose a topic that I thought…was going to grab…the majority, and certainly my more reluctant writers". When analysing why a lesson on "chopping down a tree" has been particularly effective, Teacher 5 suggested that it was because the students, particularly the boys, had "an emotional link to the task". The teacher noted that the boys were "really engaged in the task…maybe because of the talk we did near the beginning about the tree being sentry or guardian to the school. This seemed to strike a chord with the boys." The

teacher also noted that "the quality of the boys' writing [from this task] was what I consider to be higher than the girls'".

Student engagement and motivation in a writing task is also generated by the degree of perceived challenge that the task holds for the writer. The degree of challenge that writers perceive about a task emanates not only from their perception of the content knowledge that they believe they need to bring to the task, but also from their perceived proficiency at using their cognitive processes and memory to generate a text that matches the task requirements. Refer back to **Section 2.4.3** for research details on links between task challenge and learner gains (Blumenfeld, 1992; Perry et al., 2004; Rohrkemper & Corno, 1988).

Students interviewed during the study (after lesson observations) were always asked about the level of challenge that they perceived to be in the writing task that they had undertaken: "How difficult was this task for you (very easy, quite easy, a little bit easy, a little bit difficult, quite difficult, very difficult)? If it was difficult, what made it difficult?" Refer to **Appendix G** for details of questions asked of students after lesson observations.

During the study, 113 individual interviews were undertaken with students after lesson observations. Although no interviewees stated that the task was "very easy", most (n = 86) stated that it was "quite easy" or "a little bit easy". Some (n = 19) stated that it was "a little bit difficult" and a few (n = 8) that it was "quite difficult". No students stated that the task was "very difficult", though analyses of generated work samples suggested that particular tasks probably were "very difficult" for some. When asked why a particular task was "a little bit difficult" or "quite difficult", students usually discussed content challenges or organisational or behavioural issues. They typically shared comments such as, "I didn't really know what to write about" or "Our group mucked around too much". Although no interviewed student linked the concept of "challenge" or "difficulty" directly to their perceived proficiency at using cognitive processes and memory, most responses (n = 91) to the question, "What do you need to get better at as a writer?" referred to challenges within the development of word or sentence formation and re-formation skills (especially vocabulary usage, spelling, editing, punctuation and grammar). Other statements referred to skills as diverse as "coming up with ideas", "thinking more about purpose" and "handwriting".

This set of student reflections suggests that teacher participants provided sufficient but not excessive challenge in the writing tasks they selected or constructed for most of their

students. This implies that engagement in the writing task was not impeded for most students in the study by the degree of cognitive challenge.

The research literature on task orientation (as outlined in **Section 2.4.3**) also suggests that learning tasks need to be designed in a way that enables teachers and learners to ascertain clearly the degree of goal-oriented progress being made through implementation of the task (Black & Wiliam, 1998; Lodewyk et al., 2009). This includes the act of designing task content that provides opportunities for learning goals to be met by learners in an engaging and motivating way. Few teacher participants (n = 2) actually articulated the need for learning tasks to link directly to students' identified learning goals. As an exception, Teacher 2 discussed how s/he had designed a particular introductory task (exploring homophones) because his/her students had demonstrated non-mastery of this concept and needed to master it in order to be successful at a follow-up task. But all teacher participants implied, through their discussion of goal-oriented issues, some understanding of the concept that learning goal design and learning task design are complementary. They suggested, for example, that "learning goals drive my writing programme but my kids won't be able to meet them unless they're really involved in the task" (Teacher 8).

Students were required to undertake a range of writing process tasks during the 29 observed lessons that involved creating a text. With reference to the key stages of planning, generating, and revising or reviewing that writers move between as they create texts, student participants were required to focus principally on "planning" during 12 of the observed lessons. This mainly involved forming and ordering ideas for writing, learning about the features of the text form to be used during writing, or building a vocabulary bank to be used during writing. They were required to focus on both "planning" and "generating" during seven lessons, generally with an expectation that an introductory paragraph would be generated by the end of the lesson. During six lessons, they were required to focus mainly on "generating text", usually with an expectation that previously completed planning be used to generate an initial draft of a text. They were required to focus mainly on "revising or reviewing" during just four lessons, usually with an expectation that all changes designed to enhance meaning, impact and accuracy be implemented proficiently.

Although students were required to focus mainly on "revising or reviewing" texts in considerably fewer lessons than they were required to focus on other aspects of text formation, all teacher participants acknowledged the importance of "revising or reviewing"

(during post-observation interviews) and discussed how students would be required to "revise or review" their drafts in subsequent lessons. For example, Teacher 5, whose students had planned and generated an initial draft about the tree that was to be chopped down, stated that "we're going to come back [to our drafts] tomorrow and have another look at them after we've had time to just let them sit for a while…We'll have a go at strengthening that characterisation…"

5.2.3. Task organisation

Teacher participants (as previously indicated) demonstrated varying levels of proficiency with regard to task organisation. Task organisation principally means ensuring that students undertake a variety of learning tasks within a writing programme which is organised in diverse ways. As outlined in **Section 2.4.3**, this requires teachers to organise the programme so that learning tasks are open-ended in nature and involve students in the construction of learning tasks (Ames, 1992; Blumenfeld, 1992; Marshall & Weinstein, 1984; Paris & Winograd, 1990). Task organisation challenges, however, are sometimes contingent on the purpose of the writing task. If, for example, the purpose is for the writer to reflect on a personal experience, it is appropriate that the actual topic be as open-ended as possible; whereas if the purpose is to report on a scientific discovery, it is appropriate that the topic be closed in that it is specific to that discovery.

Seven of the nine teacher participants scored highly (above the midway point) on a 7-point scale at selecting or constructing learning tasks that are open-ended in nature. This probably reflects the emphasis that they placed on requiring students to write principally from their personal experience or their imagination during the study. There was greater variability, however, in teacher participants' proficiency at involving students in the construction of learning tasks. Only two teachers scored highly at this, with five teachers scoring 3.0 or less.

About half (n = 17) of the 31 writing lessons that were observed during the study involved students having some degree of choice in selecting an actual writing topic, though generally within broad parameters established by the teacher. As such, most learning tasks could be regarded as somewhat open-ended in nature. For example, Teacher 6 required students to "explain how something works" through writing, but encouraged unlimited choice about what could be explained, and Teacher 8 motivated students (through story-telling) to recount "any kind of accident" they had experienced. In other instances (n = 7), students had some choice in selecting a writing topic, but within relatively tight parameters set by the

teacher. For example, Teacher 5 required students to write a set of instructions, but only instructions that could be followed by other students when cooking at camp. On other occasions (n = 7), writing topics were not open-ended. But that was generally because writing instruction was focused around particular content (such as "how the brain or heart works") that students had developed (generally through cross-curricular learning), or because lessons were skill- rather than topic-based.

Only one of the 31 observed writing lessons involved students being fully involved in the construction of the learning task. Teacher 8, in fact, began an instructional writing lesson by inquiring of students, "What things have we been doing lately that we can really write about? Have a think…Now talk to your partner." After getting suggestions from students, there appeared to be consensus that "a recent market day operated by students" would be a good topic for writing. The teacher then inquired of the students, "What do you want your readers to know about market day?" This generated teacher-student and student-student discourse about a purpose for writing – for example:

> *So you want to tell your writer what happened…You'd be writing a recount…Ooh, so you want to write a report on Market Day…who would be your readers if you were writing a report?...Yes, it could go into the school newsletter…Mm, so your idea is to write an argument about what product is better, what's the best food choice…OK, so maybe an argument with another school saying they should have a Market Day…because ours was so good.*

The students, as guided but not directed by the teacher, had selected not only the topic for writing but also the purpose and anticipated audience for writing. Students, working in groups, were in fact encouraged to select their own purpose for writing. When asked, prior to the observation, "What are your students going to write about?", Teacher 8 had responded, "I don't know…I'll see what they decide…They can work out their own topic." Students during this lesson were fully involved in constructing the writing task.

The apparent reticence by most teacher participants to involve their students fully in selecting or constructing writing tasks matched their responses to the interview question, "Are writing topics mainly selected by you or your students?" Almost all teacher participants (n = 8) responded that writing topics were mainly selected by them (rather than their students), though some (n = 3) described how they attempted to include "free writing" periods in their programme. Reasons given for not involving students more fully in selecting

or constructing writing tasks included a perception that some students were not motivated to select their own topics, a belief that some students did not know how to select a topic, and a frustration that school directions on task selection had to be followed. When reflecting on their practice, however, some teacher participants (n = 5) stated that they would like to involve their students more in task selection. As Teacher 5 reflected:

> *I'd really like to give my kids more opportunities to write on self-selected topics…I've tried to do a little bit of that this year and…that was one of my goals…you know, sort of to develop independent writers…and give them more ownership…My difficulty has been monitoring that and just keeping tabs on what everyone is doing…Managing that has been the real challenge for me but I'll keep thinking about how we can make it work.*

Another point of interest relates to how teachers ensure that students' varying learning needs are addressed through differentiation of learning tasks. Only one teacher participant demonstrated this point explicitly. Although Teacher 4 had developed a generic writing task for all students to undertake (narrating a bank robbery), s/he had modified the task for each of three ability-based writing groups so as to ensure that there was sufficient challenge for each group. The lowest-achieving group, for example, had to include "at least three events in their plot" whereas the other groups had to include "at least five events". Almost all teacher participants (n = 8) referred more to goal-orientation than task-orientation when reflecting on ways they differentiated lessons so as to address students' varying learning needs.

An additional point of interest relates to how teacher participants organise task implementation so that students are exposed to diverse ways of working during the writing process. Tasks can be designed as cooperative or interactive activities or as activities for single learners; they can be designed as single tasks for all learners or as multiple tasks for learners to select from; and some may be designed to be teacher-directed whereas others may be learner-directed (Lodewyk & Winne, 2005). Refer to **Section 2.4.3** for research details on various ways of organising tasks. Almost all 31 observed lessons (n = 30) were mainly teacher-directed, though (as noted previously) students in most lessons (n = 24) had some involvement in task selection or modification.

Being teacher-directed meant that the teacher introduced a pre-determined task to students near the beginning of the instructional period, whether the lesson's focus was on planning,

text generation or revising and reviewing. In all instances, the generic task was explored through discourse with the whole class. In most of the observed lessons (n = 24), some students then proceeded to undertake the task as individual learners or in pairs or groups while the teacher interacted with a small group or groups of students (apart from the others) about the task. In most cases, the group was formed as the result of particular learning needs being identified, but in a few cases (n = 3), groups had been determined previously as the result of analysed assessment data. In other observed lessons, students proceeded to undertake the task in pairs or groups (n = 5) or as individual learners (n = 2) and the teacher interacted with them while roving around the class. Interactions were mainly with individual learners. Teacher participants in this study appeared to favour cooperative or interactive learning tasks which were principally teacher-directed in nature.

5.2.4. Some conclusions

Within the aforementioned pattern of all dimensions of effective practice contributing to higher than anticipated student achievement, there appears to be evidence from teacher proficiency data and learner gains that the content and organisation of the learning tasks that teacher participants establish and implement with their students is strongly associated with generating positive outcomes in writing. In particular, classroom-based evidence supports the research literature's contention (summarised in **Section 2.4.3**) that task orientation is effective if learning tasks are meaningful to students, contain sufficient degrees of challenge and are linked to goal orientation. In addition, students need to undertake a variety and diversity of tasks. All participants amongst this group of exceptional teachers demonstrated (through their actions and articulations) high or reasonably high levels of proficiency around these desired outcomes.

But the research literature suggests that effective task orientation also means teachers providing opportunities for students to assume some ownership of tasks to be undertaken, especially if tasks are to be meaningful to them. This particularly means teachers enabling their students to be involved in the selection and construction of tasks. Although all teacher participants demonstrated some proficiency around this strategy, only one teacher (Teacher 8) demonstrated it at a high or reasonably high level of proficiency. This suggests that attending to this desired outcome is potentially an important developmental step for some teachers.

5.3. Direct instruction

As reported in **Chapter 4**, there also appears to be a strong association between the quality and level of direct instruction that teachers provide for their students and their capacity to generate positive outcomes in student writing. This finding was signalled in the previous chapter through the statistically significant correlation between the effective implementation of *Direct Instruction* (as a dimension of effective practice) and student learning gains over time. But it was anticipated that it would be strengthened further by classroom evidence in this chapter; from all teacher participants but especially from those whose students made the greatest learning gains.

This assertion of a strong association between direct instruction and learner gains links to the high level of importance that many literacy researchers attribute to direct instruction as a key component of effective literacy instruction, as reported in **Section 2.4.4** (De La Paz & Graham, 2002; Grossman et al., 2013; Hmelo-Silver et al., 2007; Knudson, 1990; Purcell-Gates et al., 2007; Williams & Colomb, 1993).

It was also reported in **Chapter 4** that there is a statistically significant correlation between the effective implementation of *Direct Instruction* and two other dimensions of effective practice: *Learning Tasks* ($r_s = .86$, $p < .01$) and *Learning Goals* ($r_s = .76$, $p < .05$). This means, for example, that if teachers demonstrate proficiency within the dimension of *Direct Instruction* it is somewhat likely that they will demonstrate proficiency within the dimension of *Learning Tasks*. This suggests a strong inter-dependence between *Learning Tasks* and *Direct Instruction* as conjoint features of effective writing instruction.

In follow-up calculations, however, no significant correlations became apparent between any particular instructional strategies within the *Direct Instruction* dimension and learner gains or decreased achievement variance over time.

5.3.1. An overview of teacher participant proficiency and variability

Almost all participants in this study of exceptional teachers demonstrated high levels of proficiency for almost all aspects of direct instruction described in **Section 2.4.4**. This indicates a strong commitment amongst them to provide guidance "specifically designed to support the cognitive processing necessary for learning" (Kirschner et al., 2006, p. 76). Analysis of lesson observation data and subsequent interview data (with both teachers and students) supports this conclusion. Refer to Table 14 for measures of central tendency

calculated for "all teachers" (on a 7-point scale) in relation to the seven instructional strategies in the *Direct Instruction* dimension.

Table 14: Direct instruction instructional strategies

Instructional strategy	*M*	*SD*	Median	Mode	Range
Explains or demonstrates clearly what students are expected to do	6.11	1.05	6.0	7.0	3.0
Makes clear links and builds on what students already know	5.44	1.01	6.0	6.0	3.0
Uses teachable moments to provide instruction effectively	5.11	1.17	5.0	5.0	4.0
Uses the language of writing when interacting with students	5.33	1.32	5.0	5.0	4.0
Questions students effectively	6.44	0.73	7.0	7.0	2.0
Prompts students effectively	6.33	0.71	6.0	6.0*	2.0
Checks that students understand what they have learnt	4.0	1.41	4.0	3.0	4.0

Note. *Multiple modes exist. The smallest value is shown.

The average mean score for all seven strategies in the *Direct Instruction* dimension is 5.54, giving it top placement in the ranked list of all eight dimensions of effective practice. The mean for three instructional strategies ("questions students effectively", "prompts students effectively" and "explains or demonstrates clearly what students are expected to do") is considerably above the average mean and the mean for one strategy ("checks that students understand what they have learnt") is considerably below.

The dataset for this dimension suggests in particular that effective teacher oral discourse is a very important aspect of effective literacy practice. There are very high levels of proficiency (and reasonably low levels of variability) for the three instructional strategies that link most directly with teacher oral discourse. All teacher participants scored significantly above the midway point on a 7-point scale for questioning and prompting students effectively and almost all (n = 8) scored at a similar level for being able to explain or demonstrate clearly what students are expected to do during instructional lessons. The mean for each of these strategies places them within the upper quartile of all 52 ranked strategies.

This finding links closely with the research literature that emphasises proficient use of oral discourse strategies (such as questioning, prompting and demonstrating) within varying

modes of writing instruction as a critical component of effective literacy practice (Dyson & Freedman, 2003; Englert et al., 1991; Nystrand et al., 1998; Schunk, 2003).

Overall, there is a reasonably high degree of homogeneity between proficiency levels calculated for most teacher participants in this dimension. The exceptions are Teachers 3 and 7 whose students made amongst the lowest achievement gains over time (refer to data in Table 2). But even their data indicates levels of proficiency above the midway point. Refer to Table 15 for the mean of each teacher participant's summed proficiency level for all *Direct Instruction* instructional strategies.

Table 15: Teacher participants' proficiency levels related to direct instruction items

Teacher	Mean summed score for all instructional strategies
1	5.71
2	6.0
3	4.29
4	5.71
5	5.71
6	6.0
7	4.86
8	6.14
9	5.43

As indicated, all of the *Direct Instruction* data cited suggest particular strengths by teacher participants with regard to oral discourse, especially questioning, prompting and demonstrating. There appears to be a strong association between high proficiency for these instructional strategies and learner gains. Teachers whose students made the greatest learning gains over time scored amongst the highest for *Direct Instruction* (as a dimension of effective practice) and especially for teacher oral discourse-related strategies within the dimension.

Exploring the pedagogical features of direct instruction (particularly demonstrating and questioning) utilised by teacher participants during the study comprises the major part of this section. As oral discourse underpins all aspects of direct instruction, there is of necessity some cross-over between illustrations of teachers demonstrating and questioning in instructional contexts. A minor part of the section refers to the level of direct instruction provided by teachers. Findings around these points are important in that there is some debate within the research literature (as reported in **Section 2.4.4**) on the nature and degree of direct instruction that is required to generate learner gains within writing. Some

researchers (for example, Kirschner et al., 2006; Sweller et al., 2007) argue for maximal guidance, and some for minimal guidance (Hmelo-Silver et al., 2007; Knudson, 1990).

5.3.2. Features of direct instruction: Demonstrating

Demonstrating (usually in combination with questioning and explaining, and often referred to by teachers as "modelling") is the pedagogical feature of direct instruction that teacher participants appeared to utilise most widely in this study. It was the predominant instructional strategy employed in 19 of the 31 observed lessons, and a minor instructional strategy in 10 others. In just two lessons was there no evidence of demonstrating being used as an instructional strategy. This apparent preference for demonstrating amongst this group of exceptional teachers matches conclusions made in a range of research literature that explores aspects of high quality direct instruction (Aulls, 2002; Englert et al., 1991; Knudson, 1990; Purcell-Gates et al., 2007; Schunk, 2003; Smagorinsky, 1992).

Whether utilised as a major or minor instructional strategy, demonstrating was used principally to help students recognise and understand particular content, linguistic and structural features in texts that linked to the anticipated output of particular tasks. For this, teacher participants mostly required students to identify and discuss those features in texts that had been especially selected to demonstrate particular writing points. This form of demonstrating might be regarded as receptive demonstrating, in that it requires students to learn mainly from texts that have been previously composed.

Often more than one text was referred to during a lesson. Sometimes the selected texts were regarded as model or exemplary texts (n = 14) and sometimes as texts suitable for re-working (n = 8). Some texts selected for demonstrating had been written by the teachers' current or past students (n = 12), some by writers outside the classroom (n = 8) and a few by the teacher (n = 2). In most cases (n = 13), the text was principally used to demonstrate the learning goal or success criteria of the lesson, but in other cases (n = 9) it was used to demonstrate particular writer actions (especially planning and reviewing or revising actions) that students needed to undertake. In some cases, particularly when the text was used to demonstrate the learning goal or success criteria, it was also used to motivate and engage students with regard to possible content and writer actions. This was especially the case when texts from teachers' past students were used.

As an indicative case, Teacher 5 demonstrated a poetic feature (personification) that students would be encouraged to use in text composition. S/he did this through shared

reading and discussion of a strategically chosen text. Note that the teacher had already ascertained that most students held some prior knowledge of the feature to be discussed.

Teacher:	*Read along with me everyone. 'Rusty roof, paint peeling off like an old wrinkled person. Dad's up the ladder painting new skin on the house. The fence is crippled and broken.' Can you pull out of there the parts that make the house personified? George?*
Student:	*Um, 'The paint is coming off like an old wrinkled person'.*
Teacher:	*Yes, isn't that a lovely image. Ben?*
Student:	*'Painting new skin on the house.'*
Teacher:	*Yes, what image do you get in your mind from that Ben?*
Student:	*It's kind of like the person is having an operation.*
Teacher:	*That's interesting. I wonder how you worked that out. To me it's kind of like putting sunscreen on. They do talk about sunscreen and house paints don't they? But I can see your image. Maybe like grafting skin... Okay, Jack?*
Student:	*'The rusty roof.'*
Teacher:	*'The rusty roof'...is that personification? Do people rust?*
Student:	*No.*
Teacher:	*No. Okay.*
Student:	*They get old.*
Teacher:	*They do get old, so we're getting the impression of age aren't we? But not personification, and that's where we've got to be quite specific Jack. So thank you for bringing that up. Because 'rusty roof' is not personification. However, 'the old wrinkled person', the part of the skin, is personification. Okay? But you're right, it gives the impression of age, which is what we're going for with the 'old person.' Matt?*
Student:	*Um, when it said the 'fence was crippled.'*
Teacher:	*Yes. Because being crippled is a human condition or characteristic. Okay...*

The teacher used metacognitive questioning and extended discussion as features of direct instruction. S/he began the discussion with a closed question but one that required some deep and prior knowledge of the feature being considered and an ability to infer meaning from imagery in poetic text: "Can you pull out of there the parts that make the house personified?" The teacher's follow-up questions required depth of understanding by respondents in that they were interactive and metacognitive in intent. When Jack was asked,

"'The rusty roof'...is that personification? Do people rust?", he was prompted to think deeply about his particular understanding of personification in order to respond appropriately.

But of greater significance were the teacher's reactions to student responses. Not only were they encouraging and affirming of the respondents' thinking (Jack was thanked for giving an incorrect answer because it led to an important explanation, and was told that he was actually "right" because his answer "gives an impression"), but they required (in two instances) the respondent to justify and extend their initial response in a way that made them think metacognitively ("What image do you get in your mind from that Ben?" and "Is that personification? Do people rust?"). The teacher's reactions to student responses also suggested excitement and interest in the text being discussed ("Yes, isn't that a lovely image") as well as the capacity to think metacognitively about the poet's meaning ("To me it's kind of like putting sunscreen on"). This suggests that not only did the teacher select a text to demonstrate particular cognitive points, but also demonstrated how s/he undertook the thinking that students were required to undertake.

Ultimately, however, the discussion led to reinforcement of the students' understanding of personification as a poetic concept and a reminder to students of how deeply they must think about text content and formation as they read and write. The teacher used Jack's response as a point of direct instruction for all students as s/he demonstrated (through effective questioning, prompting and commenting) what the teaching point "looks like" within a poetic context that is familiar to students.

However, in some other lessons (including another lesson in Classroom 5), the instructional strategy of demonstrating was utilised in a more active way. In five observed lessons it was used by teacher participants to promote particular writing processes and strategies that writers utilise to plan, craft and re-craft texts through strategically selected actions. In all such cases, this meant teachers writing collaboratively with students (usually a group) on a topic that linked to the anticipated output of the class task. This always involved the teacher leading the process by scribing (in front of students) from decisions that were being made collaboratively about (for example) content inclusion, vocabulary or language feature appropriateness, word or sentence formation and re-formation strategies, and structure or organisation of texts. Decisions about what to scribe were made through a strategic blend of questioning, responding, prompting, commenting, explaining and "thinking aloud" by the

teacher. By leading the shared writing process, the teacher not only demonstrated particular text formation processes but also demonstrated that s/he was an active member of a writing community.

The following indicative case illustrates and exemplifies more active demonstrating. Teacher 6 worked collaboratively with a small group of under-achieving and usually disengaged boys (described by the teacher as "hesitant writers") at recounting a personal experience, while the rest of the class worked independently. The activity described in this section was but a small portion of the lesson. Having requested that the group recall how they had collectively selected a writing topic (by discussing recent personal experiences), how they had planned for the task (by brainstorming and ordering main content ideas) and how they had drafted the beginning of a text together (with an intent to engage the reader through an exciting start), the teacher moved the students into re-crafting the beginning of the text by thinking critically about the vocabulary they were using. To assist with this, the teacher and students had previously developed a word bank for possible use. The text drafted so far (on the topic of jumping into water from a great height) was:

> *The water is looking at me and my throat is screaming. And my mind is saying, "Don't do it". The water is scary. The dark scary water is making me shiver and when I look at it for a long time it looks like a scary monster is about to pop out of the water.*

Having encouraged the students to acknowledge that the current draft was "all right" but that "we could take these ideas and make them even better", the teacher and students set about to make changes collaboratively. They were particularly concerned with "using the best words" and "not repeating words". As the teacher explained in the post-observation discussion, "I wanted them to be able to take their ideas and refine them...so that the sentences are stronger. Um...and to cut out the repetition".

Teacher:	*Which parts do we really like? Which parts do we really, really want to keep? I'd like to keep, 'The water is looking at me'. I think that's a really cool idea. It's like the water has become this really horrible person. Is there anything else...any other sentences that you really, really like?*
Student:	*'The dark scary water'...*
Teacher:	*You like, 'The dark scary water'. Ooh, you like those adjectives. Now, I'm thinking...the third sentence we've written is 'The dark scary*

water', and in the second sentence we've got, 'The water is scary'. Isn't that kind of the same thing? Yeah? So do we need it twice?

Student: *No.*

Teacher: *So what can we do?*

Student: *Use another word. Um, we could use another word for 'scary' in the second sentence.*

Teacher: *Mm, I think that's a good idea cause I don't know if 'the water is scary' is exciting enough. I don't know if the adjective is strong enough. Does it help us to imagine anything in our heads? Does it need something else?*

Student: *Yeah.*

Teacher: *Shall we go back to the word list we made? What do you reckon?*

Student: *Um, 'nightmare'.*

Teacher: *Okay, 'The water is nightmare'. Doesn't sound right does it. What can we do to 'nightmare' to make it sound right in the sentence?...'The water is like a nightmare'?...How about, 'The water is nightmarish'?*

Student: *What's that mean?*

Teacher: *Well, what's a nightmare?*

Student: *When you have a bad dream.*

Teacher: *Okay, so if something is '-ish' it's 'like'. It's not it, but it's like it. Yeah? If it's 'pink-ish' it's sort of, or like, pink. Um, if it's 'small-ish' it's quite small. Yes?*

Student: *'The water is nightmarish', like a nightmare.*

Teacher: *So does it fit our theme? We're looking for a better word than 'scary'. Do we like our nightmares?*

Student: *No.*

Teacher: *And they usually frighten us. So...it makes sense, it fits the context. It fits our theme...What do you reckon?*

Student: *It's good.*

Teacher: *Let's put it in then. Great problem-solving guys...that's what good writers have to do...Now let's see if we can get the spelling right...what's that rule we learnt about putting suffixes on to words that end with 'e'?...*

Although student contributions to this conversation were more responsive than initiatory, this was probably because most students in the group did not perceive themselves to be

sufficiently capable of participating more fully than they did. But observations of students at work during the lesson and post-observation discussions with some of them suggested that they were, in fact, fully engaged in the lesson. One student (working at a level that was three years lower than his expected level) described the lesson as "a really, really good lesson...cause we learnt heaps about words and that...It was fun...[The teacher] helped us a lot...It made me feel good".

The teacher had, of course, provided a high degree of scaffolding for students during the lesson. But s/he explained, in the post-observation discussion, why s/he believed that a high degree of scaffolding was necessary for this group:

> *I think it's really important to model for these kids...To talk and write...a paragraph like this....They're at the stage where I have to give them examples...And, you know, you stop and you do your think alouds: 'Hang on, I need a better word than...' 'Does that make sense?' 'Does that word look right?' So, saying out loud to these kids...showing them sort of...how I think when I'm writing in my head...To give them an idea it's okay to have these conversations and...just modelling and thinking about the thinking...If I don't model like this, they just give up, and they feel bad about themselves enough as it is...*

The teacher added, however, that s/he aimed to:

> *Make this group feel comfortable about working without me as soon as possible...But they're not ready yet. I think it will take a lot more intensive work. But if they are just at least open to the idea of 'Can I say this another way?' rather than writing the first thing that's in their head then I think they're on the path to...having deeper content...Ultimately I want them to own their writing. I want them to take responsibility for it. And also take responsibility for making it better.*

A particular point of interest relates to the range of text-based questions that the teacher asked during the lesson and the varied responses that s/he offered from time to time. The teacher questioned and responded in the direct way that s/he did so as to help develop a range of "possibilities" for students to consider in their own thinking. This was designed, as the teacher stated in the post-observation discussion, to help this group of reluctant writers "build up confidence as thinkers about writing".

The questions that the teacher asked were both authentic (in that they assumed no pre-determined response) and metacognitively intended (in that they required respondents to think deeply about writing processes). By asking, "Do we need [the word 'scary'] twice?" as a consequence of a student stating that he liked a particular phrase, respondents were required to think about the concept of vocabulary substitution. By asking, "So what can we do?", respondents were required to think further about the vocabulary substitution concept even if some of them did not have the confidence to articulate their thinking. By asking, "Shall we go back to the word list we made?", they were prompted to recall that they had developed a word list and that it was an important tool for helping with issues of vocabulary substitution. Such questions and prompts were designed to help students understand what they need to be able to do in order to be successful writers.

But offering possible responses to teacher-generated questions assisted this particular group of students even more than the mere asking of questions. It significantly helped them to extend their knowledge base about writing. It also helped them to build their confidence and enthusiasm. By providing, for example, some possible responses to the question, "What can we do to 'nightmare' to make it sound right in the sentence?" ("like a nightmare", "nightmarish"), the teacher not only gave these less confident writers some text possibilities to consider, but also began to build their semantic understanding of 'words that end with -ish'. The teacher, in fact, extended this knowledge later by prompting them to consider their assumed understanding of the meaning of "pinkish" and "smallish".

A further point of interest related to the teacher's deliberate act of adding further information to conversational or informal mentions of key writing concepts. When a student declared that he liked the phrase, "The dark scary water", the teacher checked that the students held some basic text-feature knowledge by adding, "Ooh, you like those adjectives". When the teacher agreed that another word for "scary" was needed, s/he provided justification for this by asserting, "I don't think the adjective is strong enough". When the teacher sought agreement as to whether everyone liked a particular phrase ("The water is nightmarish"), s/he "thought aloud" a list of criteria that writers need to consider when making word decisions ("So...it makes sense, it fits the context. It fits our theme"). The act of adding further information to conversational or informal mentions appeared to be designed so as to continue extending students' knowledge base and understanding of key writing concepts.

Throughout the conversation, the teacher modelled being an active member of a writing community. By offering a personal response to the question, "Which parts do we really, really want to keep?", the teacher indicated that s/he was fully involved in the writing task. By suggesting that s/he wanted to keep the phrase, "'The water is looking at me' [because] I think that's a really cool idea", the teacher communicated an enthusiasm for writing that s/he wanted the students to emulate. The teacher also made extensive use of inclusive pronouns through the conversation so as to support the notion that s/he was an active member of the writing team. This ranged from, "Which parts do *we* really like?", to "So do *we* need it twice?", to "Does it help *us* to imagine anything in *our* heads?", to "So does it fit *our* theme? *We're* looking for a better word..."

Overall, the teacher effectively led this conversation to demonstrate what good writers need to think about and implement for successful completion of a particular task. S/he did this principally through strategic use of questioning, prompting, responding, commenting, explaining and thinking aloud strategies. The teacher verified that this was the intention of the conversation by (almost) concluding it with the phrase, "Great problem-solving guys...that's what good writers have to do". This was prior to indicating that some more knowledge building (about spelling) needed to be undertaken.

As a concluding point about the quality of demonstrating provided by teacher participants in this study, it is particularly interesting to note that the teachers who focused more on active rather than receptive demonstrating were the teachers whose data indicated the strongest alignment between high teacher proficiency and greater than expected learner gains (Teachers 5, 6, 8). This suggests that, within the domain of demonstrating as an instructional strategy, there is likely to be an association between direct or active involvement by teachers in text formation and student learning gains over time. This suggested finding seems to align with the group of researchers (Aulls, 2002; Block & Israel, 2004; Englert et al., 1991; Regan & Berkeley, 2012; Schunk, 2003; Smagorinsky, 1992) who conclude that active demonstrating has a greater impact on learner gains than receptive demonstrating, as discussed in **Section 2.4.4**.

A possible association between instructional strategies that link directly with teacher discourse practices (questioning, prompting, responding, commenting, demonstrating, explaining) and effective practice has already been made, but it may be that this association

can be focused even more strongly by applying it particularly to teachers who participate actively, through collaborative text creation, in guiding students' development as writers.

5.3.3. Features of direct instruction: Questioning

All of the cases cited (as well as others within the study) indicated the significance of rich teacher-learner discourse as a means of delivering direct and effective instruction, as discussed in **Section 2.4.4**. They particularly indicated the significance of rich questioning and responding as important communicative tools for most teacher participants.

An analysis of all teacher utterances made during observed lessons indicated that more than half were questions (30%) and direct responses to questions asked (24.7%). The others could be categorised as statements (26.2%) and commands or directions (19.2%). Of the questions asked, 29.4% were initiating questions and 70.6% were follow-up or elucidating questions.

Of greater importance is the fact that almost all (89.7%) teacher utterances principally appeared to have a learning intent whereas only a few (10.3%) had a classroom management or behavioural intent. This suggests that this cohort of exceptional teachers focused significantly more on classroom teaching than classroom management in their interactions about writing with students. This pattern (with small variations) was evident across all teacher participants.

There was, however, a significant point of difference between the level of cognitive demand contained within questions constructed and asked by teachers, especially amongst those whose data indicated the strongest alignment between teacher proficiency and learner gains and the others. Using Bloom's taxonomy of cognitive objectives (Bloom, 1956), all questions were categorised into those requiring learners to recall basic knowledge of text-related issues or respond to simple text-related directions (referred to as "low cognitive demand" questions), those requiring learners to comprehend text-related issues at a relatively surface level or apply their knowledge of text-related issues to new text situations (referred to as "medium cognitive demand" questions), and those requiring learners to analyse, evaluate and synthesise text-related issues and think more deeply and metacognitively about them (referred to as "high cognitive demand" questions).

Whereas 40.6% of questions posed by teacher participants whose data indicated the strongest teacher proficiency-learner gains alignment (Teachers 5, 6, 8) were "high

cognitive demand" questions, only 16% of questions posed by teacher participants whose students made the least learning gains (Teachers 3, 7) were categorised the same. By asking (for example), "Can you pull out of [the text] the parts that made the house personified?", Teacher 5 required his/her students to analyse the text, use their current knowledge of personification to make sense of text meaning and evaluate the effectiveness of the writer's skills in employing personification as a literary device.

On the other hand, only 28.8% of questions posed by Teachers 5, 6 and 8 were "low cognitive demand", whereas 49.1% of questions posed by Teachers 3 and 7 were categorised the same. Questions such as, "Who can remember what a recount is?" and "What do we put in the first line of a colour poem?" merely required students to recall (without having to explain) some basic text knowledge.

This pattern of questioning suggests a possible association between teacher participants' capacity to construct and ask "high cognitive demand" questions (during teacher-learner interactions) and their capacity to generate high learner gains in writing. Just as those teacher participants whose students made the greatest learning gains during the study were more actively involved than other teachers were when demonstrating new learning to students, so they appeared to make greater cognitive demands of their students than did others. As hypothesised in **Section 2.4.4**, there appears to be a strong association between teachers asking "high cognitive demand" questions and generating learner gains.

5.3.4. Level of direct instruction

As indicated in **Section 2.4.4**, the level of direct instruction within a teaching and learning episode pertains principally to whether the level of instruction given by the teacher delivers sufficient or insufficient scaffolding for learners to be successful at a particular task (Hmelo-Silver et al., 2007; Kirschner et al., 2006; Sweller et al., 2007). The level of instruction required is dependent on the degree of cognitive and operational challenge contained within a task. It is also dependent on the level of expertise that the learner brings to the task. The closer that level of expertise is to expected outputs of the task, the lesser amount of direct instruction is required (Vygotsky, 1978).

Within this study, indicators of whether the appropriate level of direct instruction was utilised for a task included the degree of attention that teachers brought to identifying task challenges and planning for pedagogical actions designed to help students meet identified

challenges, and the level of challenge that learners perceived to be in a task, having undertaken aspects of it independently.

Teacher participants appeared to be aware of the need to consider and plan strategically for the level of challenge in the tasks that they implemented with their students. Teacher 4, for example, reflected in post-observation interviews on the need to provide different students with different levels of scaffolding for particular tasks. Each level of instruction, the teacher explained, was principally contingent on the degree of expertise that different learners brought to different tasks. Having grouped the students for an instructional focus on efficient use of dialogue markers, the teacher explained how s/he modified the text being used for motivation, analysis and instruction according to the reading level of each group. S/he included more visual prompts in the text for lower achieving students and asked more direct questions of lower achieving students about possible success criteria (such as, "What do you notice about what we've done to show that one person has finished talking and another person is starting? Look especially at what's on each line"). S/he explained how s/he directed the lower achieving students (through prompting) but guided the higher achieving students about where to place the dialogue markers. The teacher reflected, however, on whether a high level of direct instruction was actually necessary for the lower achieving students:

> *My less able kids did much better than I expected...I'm not sure um...whether this was because I helped them so much...or maybe it was because they actually knew more than I'd given them credit for...Or maybe even the task wasn't as hard for them as I thought it was...I think next time I won't give them so much [direct instruction] and just see how they get on...Maybe they need some more independence...*

The level of challenge that students perceived to be in tasks can be identified by reflecting on touchstone students' responses to the questions, "How difficult was [the task] for you? Really difficult? Quite difficult? A little bit difficult? A little bit easy? Quite easy? Really easy?" and "Can you think of anything special that the teacher did during the lesson that helped you know what to do or helped you be more successful?" during post-observation interviews.

As previously reported, most responses from touchstone students implied that they believed that the tasks undertaken were mainly "a little bit easy". This suggested that they had not perceived a disproportionate amount of challenge in the task. This might have been because

the teacher had scaffolded sufficiently well for learner mastery of whatever cognitive or operational challenges were in the task, or because there were in fact minimal challenges in the task. Whatever the reason, it can be inferred (from touchstone student responses) that teacher participants had devised some but not excessive challenge in the writing tasks they had selected or constructed for most of their students and that they had provided sufficient scaffolding to enable most students to meet the challenges satisfactorily. Students having a sense of little or no challenge might have been indicated by a preponderance of "quite easy" or "really easy" responses.

When asked whether the teacher had done "anything special" during the lesson to help the student "be more successful", all touchstone students responded with at least one positive statement. Most responses related to an aspect of direct instruction that the teacher had provided. This ranged from "explains what you have to do clearly" (24.3% of all comments) to "shows us what to do" (17.6%) to "gives us the criteria that we have to use" (9.5%) to "gives us good feedback" (5.4%). Most other responses related to aspects of the teacher's personal aptitudes and communicative skills. They ranged from "gives lots of one-to-one help" (14.9%) to "encourages us and makes it fun" (9.5%). Touchstone students appeared not only to be able to identify the aspects of teacher practice that helped them "be more successful" but also to appreciate teachers' efforts in helping them.

5.3.5. Some conclusions

The quantitative data reported in **Chapter 4** indicated a strong association between the effective implementation of direct instructional strategies (within the context of writing) and positive outcomes for learners. This was principally indicated by a statistically significant correlation between the effective implementation of *Direct Instruction* (as a dimension of effective practice) and student learning gains over time. In addition, all teacher participants in this study demonstrated high or reasonably high levels of proficiency for almost all operational elements within the dimension of *Direct Instruction*. This has been indicated through both qualitative and quantitative evidence.

The effective implementation of direct instructional strategies refers both to teachers' capacity to demonstrate high quality direct instructional strategies as well as their capacity to deliver appropriate levels of direct instruction. Foremost amongst the direct instructional strategies that appear to be especially important are those that relate directly to teacher discourse. There appears, for example, to be a strong association between the effective

implementation of demonstrating, questioning, prompting and explaining (as instructional strategies) and positive outcomes for learners.

Finding out what direct instruction that is effective actually "looks like" is an important aspect of this study as this topic has generated debate amongst a range of researchers. Refer to **Section 2.4.4** for details of the debate, especially around the nature and degree of direct instruction needed to generate higher than anticipated learner gains in writing. Findings from this study suggest that direct instruction deemed to be effective involves teachers undertaking more active and collaborative (rather than receptive) demonstrating with their students. It also involves pushing students' levels of cognitive thinking through strategic use of "high cognitive demand" questions during instructional interactions. Effective implementation of both of these instructional strategies appears to be a significant point of differentiation between those teacher participants whose data indicated the strongest alignment between high teacher proficiency and greater than expected learner gains as opposed to those teachers whose students made lesser learning gains.

In addition, all teacher participants seem to recognise that the level of direct instruction required is dependent on the degree of cognitive and operational challenge contained within a task. It will differ from learner to learner, depending on the level of expertise each brings to the task.

Chapter 6: Investigating and operationalising the dimensions of effective practice that correlate with decreased achievement variance

6.1. An overview of the chapter

As discussed in **Section 1.5**, another indicator of teachers' capacity to generate positive outcomes for learners in writing is their capacity to build more equitable learning outcomes by decreasing achievement variance amongst learners over time. Building more equitable learning outcomes is particularly significant when linked with ongoing acceleration of learner gains for a cohort, signalling gains over time by (almost) all within the cohort but a particular acceleration of gains by the lowest achieving learners in the cohort. As previously reported **(Section 4.2.3)**, a capacity to decrease achievement variance to the benefit of all learners but particularly to the benefit of lower achieving learners was evident in six of the nine classrooms in this study. In these classrooms, there was a decrease in the standard deviation of mean additional gains for "all learners" over time (refer to Table 5).

As also previously reported (Table 10), there is a statistically significant correlation between teacher participants' capacity to reduce the level of achievement variance in their classrooms and proficiency in three dimensions of effective practice: *Self-regulation*, *Responding to Students*, and *Organisation and Management*. The main purpose of this chapter is to operationalise these three dimensions so as to investigate further the strong association between teacher proficiency and positive outcomes for learners that is suggested in each of them. This particularly means describing key pedagogical practices associated with each of them from meaningful and purposeful teaching and learning contexts. Developing these descriptions addresses further the key research goal that frames this study, namely, to not only identify but also *describe* the nature and degree of those features of teachers' instructional practices that are most likely to generate positive outcomes in writing for Year 5 to 8 learners.

Discussion of *Self-regulation* is placed at the forefront of the chapter because it not only correlates significantly with a decrease in achievement variance but it is also the dimension of effective practice that most differentiates (by a considerable degree) between the operational proficiency of teacher participants whose students made the greatest learning

gains and other teachers' operational proficiency. Refer to **Section 4.3.1** for a discussion of this.

6.2. Self-regulation

A range of data in this study suggests that high teacher proficiency within the dimension of *Self-regulation* contributes strongly to positive outcomes for learners in writing. As reported above, not only is there is a statistically significant correlation between teacher participants' operational proficiency for *Self-regulation* and a decrease of achievement variance by learners over time, but it is also the dimension that most differentiates the operational proficiency of teacher participants whose students make the greatest learning gains, from the proficiency level of other teachers.

These findings about the pedagogical importance of *Self-regulation* match the findings of a range of other researchers reported in **Section 2.4.8** (Butler & Winne, 1995; Paris & Winograd, n.d.; Perry et al., 2008; Perry & VandeKamp, 2000; Schunk & Zimmerman, 2007; Zimmerman, 1990). As a representative statement, Gibbs & Poskitt (2010) conclude that learners "who have been taught how to use self-regulation processes and are provided with opportunities to use them, demonstrate high levels of engagement and achievement" (p. 20).

As noted in Table 11, there is also a statistically significant correlation between the effective implementation of *Self-regulation* and of *Expectations* (as dimensions of effective practice). This suggests that if teacher participants' proficiency levels are high for *Self-regulation*, it is somewhat likely that they will also be high for *Expectations*. It may be that teachers who expect their students to achieve at a high level purposefully instruct their students in how to be independent writers.

6.2.1. An overview of teacher participant proficiency and variability

Despite being strongly associated with positive outcomes for learners through evidence of decreased achievement variance in the classroom, the *Self-regulation* dimension of effective practice does not rank highly in teacher proficiency levels. Teacher participants (as a cohort) demonstrated lower levels of operational proficiency for *Self-regulation* (as a dimension of effective practice) than for all other dimensions. The mean scores for seven of the nine instructional strategies for this dimension feature, in fact, within the bottom quartile of all 52 ranked elements. Refer to Table 16 for measures of central tendency calculated for "all

teachers" (on a 7-point scale) in relation to the nine instructional strategies in the *Self-regulation* dimension.

Table 16: Self-regulation instructional strategies

Instructional strategy	*M*	*SD*	Median	Mode	Range
Gives time/opportunity to write outside writing instructional time	2.89	1.27	2.0	2.0	3.0
Gives time/opportunity to write on self-selected topics	3.11	1.45	2.0	2.0	3.0
Requires students to set personal learning goals	3.89	1.27	4.0	3.0	4.0
Requires students to self-monitor in relation to personal learning goals	3.67	1.23	4.0	5.0	3.0
Discusses writing with students in relation to personal learning goals	3.22	0.97	3.0	3.0	3.0
Encourages students to take responsibility for seeking support	2.67	1.32	2.0	2.0	4.0
Provides opportunities for students to work collaboratively	5.89	1.27	6.0	6.0	4.0
Provides opportunities for students to reflect on/articulate their learning	4.56	1.59	4.0	4.0	5.0
Encourages students to use a range of classroom writing resources	4.11	0.93	4.0	4.0	3.0

The average mean score for all nine strategies in the *Self-regulation* dimension is 3.87. This is considerably lower than the average mean score for almost all other dimensions. There are three outliers in these instructional strategies. The mean for one ("provides opportunities for students to work collaboratively") is considerably above the average mean and the means for two others ("gives time and opportunity for students to write independently outside of writing instructional time" and "encourages students to take responsibility for seeking support") are considerably below.

It is, however, the range of operational variability that particularly signals *Self-regulation* as a highly important dimension of effective practice (as well as the aforementioned correlation between teacher proficiency and decreased variance levels). The wide range of teacher participants' proficiency levels related to *Self-regulation* instructional strategies is noted in Table 17.

Table 17: Teacher participants' proficiency levels in relation to self-regulation items

Teacher	Mean summed score for all instructional strategies
1	3.77
2	4.11
3	3.33
4	2.66
5	5.44
6	3.33
7	2.88
8	5.34
9	4.0

Of particular significance is not only the wide proficiency gap between the top and bottom ranked teacher participants, but also (and especially) the wide proficiency gap between the two top ranked teachers (Teachers 5 and 8) and almost all other teachers. The difference between their levels of operational proficiency (as the teacher participants whose students made the greatest learning gains over time) and all other teachers is greater for *Self-regulation* than for any other dimension. Refer back to Table 8 for details of this difference. As such, their particular strengths in *Self-regulation* (principally actions that encourage students to assume ownership of topic selection, text formation processes, and problem-solving strategies) may signal these instructional strategies as highly important for generating positive outcomes for learners in writing.

In the following sections, there is description and discussion of the range of pedagogical actions that some teacher participants implemented so as to assist their students to move toward independence as developing writers and to help them self-monitor their progress through the utilisation of personal learning goals.

6.2.2. Moving toward independence

The ultimate goal of being a self-regulated writer is for students to be able to write confidently and proficiently away from any teacher guidance (Perry & Drummond, 2002; Zimmerman, 1990). Therefore, it is useful to discuss the diverse opportunities and guidelines that teacher participants provided for students to develop independence as writers across the study.

There was evidence in almost every observed lesson (n = 30) of teachers providing some opportunities for students to work independently of the teacher (that is, without direct teacher guidance or support) for at least a part of the lesson. On most occasions (n = 24),

students worked independently as the teacher worked closely with small groups of students with similar writing-related needs. On other occasions (n = 6), students worked independently as the teacher roved amongst students, working closely with individuals.

Furthermore, there was evidence of students not only working independently of the teacher but also doing so in an engaged and focused way. The previously mentioned conclusion that almost all (89.7%) teacher utterances recorded in the study appeared to have a learning rather than a classroom management or behavioural intent supports this observation. It suggests that teacher participants were mostly content with the engagement and focus of their students as they worked independently.

However, although students were working independently of the teacher, on almost all occasions (n = 29) they were undertaking tasks that had been previously established and directed by the teacher. For example, having demonstrated and explained an example of text planning (around a shared memory of "naughty behaviour"), Teacher 1 directed students to plan (in pre-established buddy pairs) and then write (individually) their own memory of "naughty behaviour". As they undertook these tasks independently, Teacher 1 interacted with other individuals at writing challenges they were facing. Although students were working independently of the teacher, this (and other similar) examples suggested limited evidence of what the research literature appears to regard as "full independence" by students in writing contexts—that is, independence with regard to task or topic selection and management of writing processes (Paris & Winograd, n.d.; Perry & Drummond, 2002; Zimmerman, 1990).

The exceptions to teacher-directed independent working by students involved just two instances of teachers (Teachers 5 and 8) encouraging students to select and write from a range of ideas that they had previously developed and recorded in independently kept "writers' notebooks" (Calkins, 1994). Students in these classrooms received opportunities to write on self-selected topics from time to time.

However, these instances (of students working in a more independent way) were mainly undertaken only after teacher-directed tasks had been completed. They could also be undertaken as "free time" activities across the school day. As such, the students in Classrooms 5 and 8 received more meaningful opportunities to work independently than students in other classrooms received, but their opportunities could still not be considered as examples of "full independence". Even in Classroom 5 (where students made greater

learning gains than any other class made) it is worth recalling the teacher's reflection (from page 116) that:

> *I'd really like to give my kids more opportunities to write on self-selected topics…I've tried to do a little bit of that this year and…that was one of my goals…you know, sort of to develop independent writers…and give them more ownership.*

A third teacher participant (Classroom 9) also discussed the difficulty of promoting "full independence" by students:

> *Sometimes we get so entrenched in making sure that all the different types of writing are covered...all the language features are in place...we're preventing kids from feeling that they can write what they want to write...*

As well as teacher participants providing students with opportunities to write independently of the teacher (to varying degrees), there was also evidence (as implied previously) of teachers generating collaborative working opportunities for their students during almost all observed lessons (n = 30). This observation reinforces the reasonably high proficiency score that most teachers received for the practice of "providing opportunities for students to work collaboratively".

There was, however, considerable variation in how students worked collaboratively. Working collaboratively sometimes involved students planning a text together (n = 16); sometimes identifying together skills to be used when writing a text (n = 12); and sometimes writing the actual text together (n = 12). Less often it involved them giving feedback to others about their writing and discussing their own and others' progress as developing writers (n = 6). In most instances of students working collaboratively, they were encouraged to use a combination of collaborative writing actions. As a representative example, Teacher 2 directed students to work in buddy-pairs at planning the content of a fictitious newspaper report, ascertaining the skills needed for writing an effective headline for the report (from known examples), and drafting a possible headline for the intended report. Each pair was subsequently encouraged to articulate to others what they had learnt about writing effective headlines from the process, so as to begin to build a collegial understanding of effective newspaper writing skills.

There was, however, much less evidence in the study of teachers encouraging and enabling their students to write independently and consistently *outside* of instructional writing time. As suggested previously, only in Classrooms 5 and 8 were touchstone students able to display and discuss some examples of texts they had written across the classroom day and (as expressed by a student in Classroom 8) "in our own time".

Some texts that students had written in their own time were simple diary entries (mainly in Classroom 5) but most were texts generated from the aforementioned "writers' notebooks". They were a range of independently crafted texts that the students had composed and presented (sometimes electronically) from self-selected imaginative, real-life and factual ideas for writing. Factual ideas were sometimes developed from science, social science or technology topics that had engaged students as part of the classroom programme. As examples of "free writing", they were a mixture of narratives, recounts, descriptions and informational reports which students were highly motivated to write. A touchstone student in Classroom 8 discussed (for example) how "it's good when the teacher gets us to write all the time...It's fun...I like it...um...when my stories go on to the class blog and someone says they've read it". Teacher 8 explained:

> *I want writing to be a real-life thing for my students...It's not just something you do between 9 and 10, it's something you do because you've got something to say...something to write about...and you want to get it out of you...*
> *Um, I think my kids like writing cause they know they can say whatever they want (within reason!!) and they know that I'm always happy to read their writing and talk to them about it...I want them to think of themselves as writers and understand that writing isn't just something you do in writing time.*

Another pedagogical point of difference between the teachers in Classrooms 5 and 8 and the other teacher participants relates to the practice of encouraging students to "take responsibility for seeking support from others" as developing writers.

During 22 of the 31 observed lessons, instances were noted of teachers requiring particular students to attend workshops or small group lessons that had been planned to address particular writing challenges that students faced. But in most of these cases (n = 17), students were directed to attend according to learning needs that had been identified by the teacher from draft writing texts. Workshops or small group lessons were held on aspects of

content planning, development and organisation, word and sentence formation, use of appropriate vocabulary and language features in texts, and re-crafting of texts.

The teachers in Classrooms 5 and 8, however, often invited rather than directed students to attend planned workshops. Having planned workshops on writing challenges they believed their students to be facing, teachers in these classrooms encouraged them to assume responsibility for attending, according to their perceived needs. As an example of inviting rather than directing, Teacher 5 addressed the class near the beginning of lesson two in a series of lessons on writing instructions for camp activities:

Teacher: *When I looked at your draft writing yesterday, I felt that some of you hadn't introduced your topic as clearly as you could have. Anyone feel that was a problem for them? Who found it difficult to write the introduction?*

[Several hands are raised].

Teacher: *OK...let's just recall...remember what we decided about writing a good introduction for our instructions. What were we trying to do? Who can remember?*

Student: *Be really clear about the topic and make sure it's in the heading.*

Teacher: *Yep, good, what else?*

Student: *Um...hook the reader by making sure there's an interesting fact about the topic in the first couple of sentences.*

Teacher: *That's right...that's right...anything else? I'm thinking about asking a question...George?*

Student: *Um...I think you have to ask a...rhetorical question that you answer later on.*

Teacher: *Yep...you're right...you're right...you answer in the body...Now get out your introductions from yesterday everyone.*

[Students place their texts on their desks].

Teacher: *Um...my feeling is that quite a few of you... found it difficult to come up with a good hook for the reader and follow it through with a question. Most of you are fine with your titles...Now read back the introduction that you wrote yesterday and decide whether you're happy with your hook and your question. If you're not, you can come down on the mat with me in a while cause I'm going to run a bit of a workshop on this...I've asked Charlotte if I can use her introduction as a good example...thank you Charlotte...and I'll go over it with you and help you...You have a read and decide whether you need to be with me on the mat or not...No point in being here if you can just go*

> *on with your writing...If you're not sure, you might want to talk this through with your writing buddy.. Try and be honest with yourselves....*

This teacher still maintained the right, however, to direct students to attend particular workshops if s/he had identified needs that the student had neither noticed nor understood.

As these particular aspects of working independently (encouraging students to "write outside of instructional writing time", "seek support from others independently" and to a lesser degree "write on self-selected topics") are demonstrated at a reasonably proficient level almost exclusively by the teacher participants whose students made the greatest learning gains over time, it is reasonable to infer that instructional strategies related to them should be considered as very important features of effective literacy practice. This finding is very important as an initial indicator of what effective teachers of writing need to do in order to promote self-regulated learning habits and behaviours amongst students. It links closely with some of the key notions identified in the literacy-related self-regulation research literature (Perry, 1998; Perry & VandeKamp, 2000; Perry et al., 2008; Zimmerman, 1990) and reported in **Section 2.4.8**.

6.2.3. Setting and utilising personal learning goals

The research literature suggests a strong association between learners' capacity to set and utilise personal learning goals when writing and their ability to make progress in writing over time (Paris & Winograd, n.d.; Perry, 1998; Perry & Drummond, 2002; Perry & VandeKamp, 2000). Setting and utilising personal learning goals principally involves learners establishing such goals, self-monitoring and evaluating progress in relation to them, referring to them during conversations about progress, and utilising knowledge of progress to establish new goals.

There is evidence in this study of eight teacher participants implementing instructional strategies that generate habitual use of personal learning goals by students, but not at a high level of proficiency. This is signalled by the relatively low mean (3.59 on a 7-point scale) that teachers scored (as a cohort) for the three instructional strategies that relate to the setting and utilising of personal learning goals. Furthermore, there was little variability around this mean.

This limited evidence of operational proficiency around personal learning goals was also signalled by the fact that only 27.4% of touchstone students (n = 31) could articulate with a

reasonable degree of specificity (during post-observation interviews) the most recent personal learning goals that they had established for themselves. Almost all others could nominate a very broad area of writing development that they needed to improve (e.g., "use more interesting words" or "get better at spelling") but found it difficult to provide more detail about their goal, even when prompted. Nor did many of them have their version of a personal learning goal recorded. Specific personal learning goals that were recorded ranged mainly across the deeper features of writing (e.g., "To be able to vary my sentence beginnings" or "To get myself better organised when planning a text"), though some linked more directly with the surface features (e.g., "To be able to use a dictionary better to help me with my spelling and get more synonyms" or "I need to improve my proof-reading skills, especially full-stops to show where ideas end").

Five teacher participants discussed in some depth how their students established personal learning goals. Three of them suggested that the students developed them directly from feedback given (mainly by the teacher) about writing skills demonstrated or not demonstrated in presented texts (which teachers often referred to as published texts). In all cases cited, however, the teacher guided the student about possible learning priorities contained in the feedback and helped students formulate the wording of their goals. All five used existing and understood categories of goal classification (such as "content", "structure", "vocabulary", "language features", "sentence formation or grammar", "spelling" and "punctuation") so as to help students better organise and understand their goals. Categories of goal classification were usually based on categories in commonly used assessment tools, such as the asTTle writing tool. Two teacher participants suggested that their students' personal learning goals were, in fact, developed directly from analysed asTTle data. On average, students were encouraged to establish new or revised personal learning goals once a term.

However, all five teacher participants suggested that their preference would be for greater student involvement in the formation of goals. As a representative example, Teacher 2 explained:

Teacher:	*All my students have individual learning goals.*
Interviewer:	*So how do the kids actually form them?*
Teacher:	*Well... in Term 1 I form them from their unassisted writing. I write down what they've got to work towards.*
Interviewer:	*Um hm.*

Teacher: *Um, and then from Term 2 onwards we look back at that goal, have they worked towards that? And then they look at their writing, and we have a little chat, bit of a conference, one-on-one, and they start to get the idea of how to formulate their goals themselves.*

Interviewer: *Okay.*

Teacher: *More... teacher-directed the first half of the year.*

Interviewer: *Right.*

Teacher: *Just to try and get them thinking and then once they feel they're a bit more confident, have an idea of where they need to go... I... I try and coax the words out and then they feel they have ownership of it. But I have to admit that I still have a lot of say in it...It would be good if they had more...*

This matches the response that many touchstone students gave when asked about forming personal learning goals. As many suggested, they are "mainly written by the teacher".

There was little evidence of students monitoring their progress in relation to personal learning goals. No touchstone student could explain in any detail how s/he knew whether any personal learning goals that had been set were being met, apart from being informed by the teacher. This was despite several teacher participants explaining in some depth how they perceived their students to be monitoring their progress. As a representative example, Teacher 1 explained:

> *1.30 on a Friday is [the students'] Learning Journal time...They then look at their goal and then comment on it...Um, it might be that they write a feedback statement...yeah...or...it might be that they highlight something...sometimes I get them to use different coloured pens...and they might highlight the bit that shows they are doing something particularly well. Or the piece that they most like in their writing that demonstrates something that they are focusing on...*

The touchstone students in Teacher 1's classroom could describe what they recorded in their Learning Journals, but none appeared to associate their weekly entries with the concept of monitoring progress in relation to personal learning goals. They appeared to be recording more in relation to what they believed they had achieved (or not achieved) in a week (almost as diary entries) rather than what they believed they should be achieving.

There was also little evidence of teacher participants making specific reference to students' personal learning goals when conversing with students formatively about their writing.

Formative feedback statements appeared to be given mostly in relation to class or group learning goals for particular lessons. Statements made about students' immediate or unique needs (such as warnings in a text to "be more careful" with spelling and punctuation) did not usually appear to be given with reference to personal learning goals that had been set. As Teacher 9 explained, "Sometimes you end up perhaps not following up on the individual goals as much as you do on the class goals and work that you are actually doing with all of the children."

Although the effective implementation of instructional strategies designed to promote the setting and utilisation of personal learning goals by students seems to be an important component of effective literacy practice (Black & Wiliam, 1998; Black et al., 2003; Clarke et al., 2003; Zimmerman, 1990), there is insufficient statistical or operational evidence in this study to nominate it as a component that is implemented proficiently.

6.2.4. Some conclusions

Qualitative (and some quantitative) data in this study suggest that there is a strong association between the effective implementation of *Self-regulation* (as a dimension of effective practice) and some positive outcomes for learners in writing over time. This conclusion is particularly supported by the statistically significant correlation between the levels of operational proficiency for *Self-regulation* and a decrease in achievement variability over time, as well as the high levels of proficiency demonstrated by teachers (in marked contrast with other teachers) whose students made the greatest learning gains.

The most significant findings relate to the importance of students being able to write independently outside of instructional writing time, feeling confident about seeking writing-related support independently from others, and writing on self-selected topics or undertaking self-selected writing tasks from time to time. Pedagogical actions that lead to these learner outcomes appear to be very important components of effective writing instruction. These findings reinforce the concept that effective student writers need to assume some degree of ownership of the writing processes they are undertaking.

Further investigation indicated, in fact, that there is a statistically significant correlation between the effective implementation of some of these strategies and decreased achievement variance over time. They relate to teachers' capacity to "ensure that students receive regular opportunities to write independently or collaboratively" ($r_s = .775$, $p < .014$) and their capacity to "ensure that students receive regular opportunities to write on self-

selected topics" (r_s = .839, p < .005). These findings further reinforce the concept of ownership as a very important component of effective writing instruction. But they need to be considered with caution given the potential for error in making correlational calculations at the micro level (as discussed on p. 82).

Graham & Harris (1997) debated the level of significance to be attributed to *Self-regulation* as a dimension of effective practice, as discussed in **Section 2.4.8**. They suggested that "the role of self-regulation in writing may be more modest than commonly assumed" (p. 104). But this study positions it as having a strong association with higher than anticipated learner gains.

In the same article, Graham & Harris (1997) called for researchers to develop more "naturalistic studies....[of] a fuller and richer picture of the development of self-regulation in writing" (p. 106). This discussion has been an attempt to describe what this "picture" looks like amongst a cohort of exceptional teachers. The fact that there is considerable variability among the mean scores attributed to some instructional strategies within that "picture" suggests that this could be an area of further development for many teachers.

6.3. Responding to students

As reported in **Chapter 4**, there is also a strong association between the effective implementation of *Responding to Students* (as a dimension of effective practice) and positive outcomes for students. This is particularly signalled through the statistically significant correlation between teacher participants' operational proficiency for *Responding to Students* and a decrease of achievement variance by learners over time.

As expected (because of the exceptional nature of the cohort), teacher participants in this study demonstrated high or reasonably high levels of proficiency for almost all aspects of *Responding to Students* described in the research literature (**Section 2.4.5**). Analysis of lesson observation data and subsequent interview data (with both teachers and students) supports this conclusion. But it is important to note that discussions between teachers and students about writing were only observed at the group level because of recording limitations. Some recorded discussions at the group level did, however, include teacher interactions with individual students about their (or others') writing. No particular focus was placed on the analysis of written feedback given to students.

Refer to Table 18 for measures of central tendency calculated for "all teachers" (on a 7-point scale) in relation to the six instructional strategies in the *Responding to Students* dimension.

Table 18: Responding to student's instructional strategies

Instructional strategy	*M*	*SD*	Median	Mode	Range
Uses a range of ways to respond to student learning	5.67	1.0	6.0	5.0 *	3.0
Response comments are direct and specific	5.67	0.71	6.0	5.0 *	2.0
Responses focus on process rather than product	5.22	0.44	5.0	5.0	1.0
Indicates next steps to students	4.89	0.93	5.0	5.0	3.0
Checks that students understand feedback	3.67	1.0	4.0	3.0 *	3.0
Shows respect to students through actions/comments	6.56	0.88	7.0	7.0	2.0

Note. *Multiple modes exist. The smallest value is shown.

The average mean score for all six strategies in the *Responding to Students* dimension is 5.28, giving it median placement in the ranked list of all eight dimensions of effective practice.

But one instructional strategy ("shows respect to students through actions/comments") is considerably above the average mean and is, in fact, the highest ranked strategy of all 52 instructional strategies. Its very high ranking (along with its limited variance) suggests strongly that this exceptional cohort of teachers had very positive relationships with their students. Another strategy ("response comments are direct and specific") is also placed within the upper quartile of all ranked strategies (though at the bottom of it) with little variance of teacher application. The mean for one other strategy ("checks that students understand feedback") is considerably below the overall mean.

Overall, there is a reasonably high level of homogeneity amongst the proficiency levels calculated for most teacher participants in this dimension. The mean proficiency level calculated for each teacher is within 0.73 of the average mean proficiency level (5.27) for all teachers. Only three teacher participants received scores less than the average mean, including the two teachers (Teachers 3 and 7) whose students made the least achievement

gains over time. Refer to Table 19 for teacher participants' summed proficiency levels for all *Responding to Students* instructional strategies.

Table 19: Teacher participants' proficiency levels related to responding to students items

Teacher	Mean summed score for all instructional strategies
1	4.66
2	5.5
3	4.66
4	5.33
5	6.0
6	5.5
7	4.83
8	5.5
9	5.5

Examples were clearly evident across observed lessons of teacher participants responding to students (both about their writing and their development as writers) in a variety of effective ways. As a representative case, Teacher 8 discussed a Year 5 student's text (about an accident) within a small group instructional context. As the teacher guided the discussion, s/he described the student's achievement in a direct and specific manner, focused on the text formation processes that the student had manipulated, and clearly indicated next learning steps for the student to consider. The positive tone of the discussion and the detailed analysis of the text within the discussion also suggested the respect that the teacher held and communicated to the student as a developing writer.

Student (reading aloud): 'I was peddling my little heart out. I was on my bike going down the road to the Dannevirke fish and chip shop. My parents and big sister were miles away. I looked back and then all of a sudden crash! I had taken a hard hit to a concrete power pole. I screamed. My big sister and parents came stumbling down. Are you okay? Mixed emotions filled me. My three brothers, who were in front of me, came struggling up the hill like I was dying. My nose was bleeding hard. We all ran to the shops and filled my nose with handy towels. It finally stopped – I thought it never would. Ah! At least it was my only injury'.

Teacher: Thanks Charlotte. Can anyone tell me what they liked about Charlotte's piece of writing? Violet?

Student: I thought her first sentence was really good.

Teacher: 'Peddling my hea...little heart out'. That's a fantastic opening sentence, isn't it? An action verb 'peddling' and then that extra

description, 'my little heart out'. Why did you like that sentence so much Violet?

Student: *Um, I thinks it's cause I could just picture her peddling really really hard.*

Teacher: *Yep, so could I...I could really see it...Anyone else?...Hayley?*

Student: *Um, I wasn't sure about the bit...who said, Are you okay?*

Teacher: *That's a good point...Because your next step Charlotte is maybe...to add...suitable punctuation, you should put speech marks so that...as you read it there is speech there and it's someone else talking...in a different voice to the reader...kind of. Well spotted Hayley. Shannon?*

Student: *I like some of the other action verbs she uses, like 'stumbling down'. They make me see all the action.*

Teacher: *Yeah, 'stumbled' is a good action verb. And 'struggling up the hill' is another I liked. I also liked the bit about 'filled my nose with handy towel', a little bit of extra detail...specific language...This gives me a very clear picture of what the aftermath of the accident must've looked like...And Charlotte, it's good that you've been clever with the action verbs cause that's one of our goals isn't it...Hey, that's amazing considering we've just been writing for about fifteen minutes.*

This teacher-led response to Charlotte's writing not only communicated the teacher's enthusiasm for the text but also informed Charlotte what writing strategies (use of action verbs and carefully selected detail) she had employed to create a strong vision for the reader. The teacher did this by inviting students to identify examples of specific language choice (such as "peddling my little heart out", "stumbling down" and "struggling up the hill") that the writer had made and commenting enthusiastically on the examples that the students had identified.

Furthermore, the teacher informed Charlotte of the impact of her language choices. By explaining that the use of action verbs and carefully selected detail enabled the teacher (as reader) to envisage clearly the aftermath of the accident, s/he suggested the power of making strong and appropriate language choices. Clear links were also made between one of Charlotte's language choices (the use of action verbs) and a learning goal that students had been guided to address when writing. Charlotte learnt, through the teacher's response to her text, that she had been successful at addressing this goal.

By agreeing with and elucidating upon Hayley's text meaning query ("I wasn't sure about the bit...who said, Are you okay?"), the teacher helped Charlotte to consider and establish a

next learning step as a developing writer. Not only did the teacher make a teaching point about the use of appropriate punctuation, but s/he also indicated a rationale for selecting the next learning step. Attending to it, the teacher suggested, would help clarify meaning about character focus for the reader. There was limited evidence within this case, however, of Charlotte (as writer) being encouraged to reflect further on the suggested learning point or consider how she might attend to it.

During a post-observation interview, Teacher 8 commented on the pedagogical implications of his/her responses to Charlotte's text. S/he suggested that s/he needed to undertake some direct instruction with Charlotte about the use of dialogue indicators. This would be undertaken, the teacher suggested, through strategic demonstration and by indicating useful models in instructional reading texts.

This example exemplifies many of the operational features and functions of effective feedback suggested by researchers in **Section 2.4.5**. It particularly exemplifies the importance of promoting an informational function supported by deep and critical thinking about text within the feedback process (Black & Wiliam, 1998; Hattie & Timperley, 2007; Parr & Timperley, 2010; Sadler, 1989; Tunstall & Gipps, 1996). It also exemplifies the importance of teachers reflecting on their pedagogy so as to help students make changes to their text formation practices (Black et al., 2003; Black & Wiliam, 1998; Yorke, 2003).

Despite the overall effectiveness of Teacher 8's practice within this case—and similar examples of effective practice across the study—most teacher participants did not regard themselves as "very effective" at responding to students about their writing. When asked to rate their capacity as effective feedback givers (on a continuum from *very effective* to *effective*, *quite effective*, or *not effective*), more teachers rated their capacity as *quite effective* (n = 4) than they did as *very effective* (n = 2) or *effective* (n = 3). An inquiry into this revealed that all teachers who did not rate themselves higher believed that they were not sufficiently descriptive in their responses to writing, especially in their written responses. Teacher 2 commented that responding to writing effectively was "a work in progress...cause I think it's really important...If the kid has spent 40 minutes writing, I think they are due the respect from me to respond to their work as best I can". The teacher added, however, that s/he did know whether the feedback s/he has given students "has made a huge difference, and they have actually gone back and changed things, and if they're not changing it then that's a signal to me that the feedback has been useless".

As reported previously, the importance of this dimension as a strong contributor to positive learning outcomes is mainly indicated by its statistically significant correlation with decreased learner variance over time. Further investigation indicated, in fact, that there is also a statistically significant correlation between teacher proficiency in "using a range of ways to affirm and/or respond to students' efforts and comments" and decreased learner variance over time ($r_s = .667$, $p < .05$).

There is, however, little evidence of *Responding to Students* being a dimension that differentiates between teacher participants' operational proficiency levels. Although the teachers whose students made the greatest learning gains achieved amongst the highest proficiency levels for the dimension (refer to Table 19), the difference between their proficiency levels and those achieved by others is not significant.

However, the overall importance of teachers responding to students' learning efforts and outputs in a broad range of meaningful ways (as suggested by the researchers in **Section 2.4.5**) is reinforced through the findings. In particular, they support the importance of teachers responding to students about their writing in direct and specific ways, focusing on text formation processes rather than products when giving feedback, and indicating next learning steps clearly to students. The research literature, however, suggests that effective teachers also ensure that students reflect on, understand and operationalise feedback. In all cases, teacher participants demonstrated respect to their students through their feedback actions and comments.

6.4. Organisation and management

There is also a strong association between the effective implementation of *Organisation and Management* (as a dimension of effective practice) and positive outcomes for students. As with *Responding to Students,* this is particularly signalled through the statistically significant correlation between teacher participants' operational proficiency for *Organisation and Management* and a decrease of achievement variance over time (as reported in **Chapter 4**).

As expected (again because of the exceptional nature of the cohort), teacher participants in this study demonstrate relatively high levels of proficiency for most aspects of classroom organisation and management described in **Section 2.4.7**. Analysis of lesson observation data and subsequent interview data (with both teachers and students) supports this conclusion. Refer to Table 20 for measures of central tendency calculated for "all teachers"

(on a 7-point scale) in relation to the six instructional strategies in the *Organisation and Management* dimension.

Table 20: Organisation and management instructional strategies

Instructional strategy	*M*	*SD*	Median	Mode	Range
Breaks lesson into easily identifiable stages	6.33	1.0	7.0	7.0	2.0
Sets manageable time allocations	5.78	1.2	6.0	6.0*	3.0
Makes instructional contact on an equitable basis	5.11	0.6	5.0	5.0	2.0
Provides sufficient opportunities or time for students to practice	5.22	1.2	5.0	5.0*	4.0
Maintains records of individual/group progress	4.56	1.01	4.0	4.0	3.0
Ensures that lesson proceeds to transparent routines	5.67	1.0	6.0	5.0*	3.0

Note. *Multiple modes exist. The smallest value is shown.

The average mean score for all six strategies in the *Organisation and Management* dimension is 5.45, giving it second placement in the ranked list of all eight dimensions of effective practice. It is, in fact, ranked second only to *Direct Instruction* by a margin of merely 0.9 on the 7-point scale.

The mean for just one instructional strategy in the dimension ("breaks lesson into easily identifiable stages") is considerably above the average mean and the mean for just one other ("maintains records of individual/group progress") is considerably below. The means for all other instructional strategies are very close to the average mean for the dimension, indicating relatively homogenous implementation of most strategies amongst this cohort of exceptional teachers.

This operational consistency is well illustrated by the low levels of variability evident in the range of teachers' mean proficiency levels calculated for this dimension. Refer to Table 21 for an overview of this range. With the exception of one outlier (Teacher 1), the mean proficiency level calculated for each teacher is within 0.55 of the average mean (5.45) calculated for the dimension.

Table 21: Teacher participants' proficiency levels related to organisation and management items

Teacher	Mean summed score for all instructional strategies
1	4.43
2	5.57
3	5.42
4	5.14
5	5.71
6	5.57
7	6.0
8	5.57
9	5.86

As with the previous dimension (*Responding to Students*), this reasonably high level of homogeneity suggests little evidence of any association between proficiency levels achieved by individual teacher participants and positive outcomes for learners. In fact, the teacher participants whose students made the least learner gains over time (Teachers 7 and 9) scored the highest and second highest levels of proficiency for this dimension. They scored slightly above the teacher whose students made the most learning gains over time (Teacher 5).

There is, however, qualitative evidence of the significance of three operational elements as important components of effective literacy practice: the need for teachers to "set manageable time allocations", "provide sufficient opportunities or time for students to practice", and (especially) "break lessons into easily identifiable stages". From the 31 lessons that were observed, an organisational pattern emerged involving five easily identifiable stages of operation: introduction or reminder of the task; whole class instruction or discussion of what is to be undertaken during the lesson; organisation of group instruction and independent writing; implementation of group instruction and independent writing; whole class sharing and celebration. Although there was some inter-teacher variation in how each of these stages was implemented, the basics of each stage were consistent across the cohort. Furthermore, the pattern that emerged clearly illustrated teacher participants providing students with sufficient instructional and practice time and opportunities.

Observed lessons generally began with an introductory session of approximately 8 to 12 minutes. This was usually planned for the whole class and led by the teacher. It was generally designed to motivate and engage students in the writing activity, or to remind them of the activity if work had been undertaken on it previously. Of those introductory sessions designed primarily to motivate and engage students, some (n = 9) were instigated

through fictional or non-fictional story-telling by the teacher, such as Teacher 6's memory of "diving into something scary"; and some (n = 5) through shared reading of a written or visual text, such as Teacher 2's guided discussion of some newspaper photographs. Some introductory sessions (n = 3) established a scenario (usually real-life) for students to consider, such as Teacher 5's report of a prominent feature of the school environment that was to be destroyed; and some (n = 3) made links with cross-curricular or thematic studies currently being undertaken, such as Teacher 9's reminder of knowledge that had been collected on "how the brain works". Some sessions (n = 2) began with an illustrated discussion of the writing skill to be practised in the lesson, such as Teacher 4's discussion of a text with dialogue indicators.

The other observed lessons (n = 9) were the second or third of a series of lessons in which verbal or written reminders (of what had been previously undertaken) replaced specific attempts to engage and motivate.

In addition, all introductory sessions made reference to the learning goal/s that underpinned the activity and linked in some way to students' prior knowledge or experience, either about the content of the activity to be undertaken or the skills or strategies required for proficient completion of the activity. The learning goal/s were either introduced or re-introduced according to the status of the activity as "new" or "continuing". A point of variation was that, when the activity was new, some teachers focused on introducing and deconstructing the learning goal with students before introducing the activity (n = 16), whereas others introduced the activity as a prelude to introducing and deconstructing the related learning goal (n = 6). This pedagogical variation is discussed further on pages 163 to 164. Three teachers, in the introductory session, also required their students to work at a minor activity (such as proficient use of dialogue indicators or understanding of homonyms) designed for mastery of some of the writing skills or strategies needed for successful completion of the main activity.

The second identified stage of almost all new lessons involved some form of whole-class discussion or instruction linked to the main activity. This mostly lasted 10 to 12 minutes. Many of these sessions (n = 12) predominantly involved shared reading and deconstruction of a published-author, teacher or student-generated text, usually similar to the text that students were expected to compose. For example, Teacher 2 deconstructed with the students an explanatory text on "how the heart works" that s/he had written. Errors deliberately made

in the text were used as instructional points by the teacher. Some of the sessions (n = 3) involved mainly shared or collaborative planning of the activity that students were expected to undertake. Teacher 1, for example, demonstrated how s/he would plan a recount of a personal experience s/he had re-told. S/he regarded this as an example of planning that students could emulate. Other sessions (n = 5) mainly involved shared or collaborative crafting (and sometimes re-crafting) of the beginning of a text, so as to instruct students around specific word, sentence or text-formation points. For example, Teacher 5 wrote a set of instructions for cooking at camp collaboratively with his/her students, focusing on the structural features of a procedural text. Some sessions involved a combination of two or three of these instructional approaches. Most of these whole-class instructional or explanatory sessions also resulted in students identifying (through strategic use of teacher questioning and prompting) text formation criteria that they believed were necessary to undertake the task successfully.

Teachers who were continuing with lessons from previous days reported a similar pattern of how they had undertaken whole-class instructional or explanatory sessions during a previous lesson. In all cases, evidence of previously developed text formation criteria for the activity was evident in the room.

The third identified stage involved the teacher organising students for task operation. This stage usually lasted approximately 3 to 5 minutes for new lessons, though sometimes slightly longer for continuing lessons. Organising students generally meant the teacher informing them whom s/he intended to work with (as a group) during the remainder of the lesson and ensuring that other students understood precisely what was expected of them as they prepared to undertake the task independently. As previously reported, in two cases (Teachers 5 and 8), the teacher invited rather than informed students to work with him/her during the lesson. If students were continuing with a task, organising them at this stage generally meant requiring them to determine what writing actions they needed to undertake in order to continue the task satisfactorily. For example, Teacher 9 requested students to identify not only what aspect of the writing process they were currently working within (such as planning, crafting or re-crafting) but also what they had generated so far (in terms of content) as they explained “how the brain works”. Students had to link their knowledge of writing processes, the planning they had previously formed and the text they had generated so far in order to meet this requirement.

The fourth (and principal) stage of all lessons was implementation of the assigned writing task, with students either working independently, in groups with the teacher, in groups with each other, or individually with the teacher. Some lessons involved a combination of these four approaches. This stage lasted for most of the remainder of the lesson and varied from approximately 30 to 40 minutes. In 17 of the 31 observed lessons, the teacher began this stage by directing or requesting a small group of under-achieving students to remain with him or her (while others moved off to write independently) and guided them on how to begin or continue the writing task that had been demonstrated and explained to the whole class. Such small group interactions rarely lasted more than 10 minutes.

Other teachers adopted other small group approaches so as to foster this stage of the lesson. In 16 lessons, the teacher directed or invited several students (usually of diverse ability levels) to form a group and work with him or her in a dedicated teaching space, usually around a group of desks and a whiteboard, in a range of ways. In 11 of these small group lessons, the focus was on helping students solve a text formation problem that had emerged from the students' previous writing (such as the need to "add detail", "strengthen vocabulary", "tighten the conclusion" or "add sentence indicators"). In five others, the focus was on encouraging students to share and discuss writing they had previously drafted and to give feedback and feed-forward to each other.

In all remaining lessons (n = 12), the teacher predominantly roved around the room (while students worked in groups, in pairs or individually) and interacted with them as s/he noted the emergence of a text formation issue. Sometimes this required some form of direct instruction but, at other times, just a strategically placed question or prompt to advance or re-focus the student/s, or merely an encouraging question.

The final stage of most lessons (n = 23) involved the teacher encouraging students to reflect on their output, particularly in relation to task requirements, and share their achievement with others. This meant not only evaluating the effectiveness and impact of their texts but also celebrating it with others. It also meant students reflecting on and identifying their strengths and needs as developing writers in relation to the text that had been created. They sometimes did this individually, sometimes in pairs and sometimes with the teacher. Oral sharing of texts (with each other and with the class) was common practice in most observed lessons. This final stage usually lasted approximately 7 to 10 minutes. Although this final stage was not evident in some lessons, this was generally because of organisational and time

issues. In post-observation interviews, all participating teachers discussed benefits of students sharing, evaluating and celebrating their written outputs, and expressed regret if it had not occurred in their lessons.

On average, the duration of observed lessons was 68 minutes. This ranged from a minimum of 58 to a maximum of 79 minutes. This is an interesting finding when compared with other researchers' findings on lesson duration reported in **Section 2.4.7**. It compares favourably, for example, with Gilbert & Graham's (2010) finding that most writing lessons in their study were approximately 40 minutes in duration. However, there is no empirical evidence in this study that the duration of each observed lesson was typical of what teachers were doing every day, despite teachers being requested to provide typical examples. Through interview, in fact, teachers self-reported that their writing lessons lasted 52 minutes on average (ranging from 45 to 60 minutes). Nor did the methodological processes of this study enable the researcher to ascertain with an acceptable level of certainty the time allocated to the teaching of writing each week. Through interview, however, teachers self-reported that they taught writing an average of four days per week, with four reporting that they taught it five days per week and just one three days per week. The issue of instructional time allocation requires further investigation.

As expected (because of the exceptional nature of the teacher cohort), observed lessons in the study were situated in enabling and efficient classrooms (Emig, 1983; Konrad et al., 2011). Overall, the findings for this dimension suggest that providing students with clearly delineated and understood stages and routines in lessons and sufficient time for instruction and practice are important components of effective literacy practice, as indeed are the instructional strategies that have been highlighted within the other dimensions in this study.

These findings are reinforced by an indication that there is also, in fact, a statistically significant correlation between the effective implementation of some of these strategies and decreased achievement variance over time. They relate to teachers' capacity to "break lessons into easily identifiable stages" ($r_s = .822$, $p < .007$), to "set manageable time allocations during the lesson" ($r_s = .806$, $p < .009$) and to "provide sufficient opportunities for students to develop and practise writing skills during the lesson" ($r_s = .776$, $p < .014$). But, as warned previously, these data need to be considered with caution because of the potential for error in making multiple correlational calculations (as discussed on pp. 104–105).

Chapter 7: Operationalising the other dimensions of effective practice

7.1. An overview of the chapter

This chapter operationalises the three dimensions of effective practice (*Learning Goals, Engaging and Challenging Students, Expectations*) that do not correlate significantly with either learner gains or decreased achievement variance within the context of this study. Operationalisation of them is important because their association with positive outcomes for learners is arguably as significant as that involving the other dimensions.

Having concluded at the end of **Chapter 4** that the cohort of exceptional teachers in this study have been successful at generating higher than anticipated learner gains and that strategic and proficient implementation of all dimensions of effective practice (in combination with each other) is necessary for generating such gains, it is important to operationalise *all* dimensions—not just those that statistically correlate with positive outcomes for learners. As mentioned previously, those dimensions that correlate directly with positive outcomes might be regarded as foreground dimensions within the repertoire of effective teachers' pedagogical tools. Proficient implementation of them has been described in full in **Chapters 5** and **6**. But describing the proficient implementation of those that sit in the background (in that they do not correlate directly with positive outcomes) is also necessary because learner gains are dependent arguably on the strategic interaction of all eight dimensions. Effective teachers need a wide repertoire of pedagogical tools. As cited previously, positive learner outcomes are contingent on "an intelligent weaving together [of a wide variety of components]" (Hall & Harding, 2003, p. 42).

As the key studies that drive this study indicate, it is unlikely that an instructional writing lesson would be deemed to be effective unless the students were clear about what they were expected to achieve as developing writers through the lesson. This means understanding the learning goal that underpinned the lesson. They would also need to be fully engaged and challenged at an appropriate level by the task being undertaken in the lesson. Refer to **Section 2.2.1** for an overview of these points as linked to *Learning Goals, Expectations* and *Engaging and Challenging Students* as dimensions of effective practice.

The inter-relationship between the three dimensions (and other dimensions) is also recognised through a range of statistically significant correlations around them (refer to

Table 11). There is correlation between *Learning Goals* and three other dimensions: *Learning Tasks* (r_s = .75, p < .05), *Direct Instruction* (r_s = .86, p < .01) and *Engaging and Challenging Students* (r_s = .73, p < .05). There is correlation between *Engaging and Challenging Students* and one other dimension: *Learning Goals* (r_s = .73, p < .05). There is also correlation between *Expectations* and one other dimension: *Self-regulation* (r_s = .92, p < .001).

In addition, some instructional strategies that sit within the three background dimensions (*Learning Goals*, *Engaging and Challenging Students*, *Expectations*) emerge as strongly associated with positive learner outcomes through qualitative analysis. Attention will principally be given in this chapter to any points of pedagogical association with learner gains that become apparent through analysis of teacher actions.

7.2. Learning goals

Predictably, the exceptional cohort of teachers in this study demonstrated reasonably high levels of proficiency for most aspects of effective goal orientation outlined in the research literature and discussed in **Section 2.4.2**. This particularly refers to teachers setting clear learning goals for their students (Locke & Latham, 1990; Timperley & Parr, 2009), ensuring that learning goals align with their students' needs (Black & Wiliam, 1998; Earley et al., 1990) and ensuring that their students understand any learning goals that have been established (Ames & Archer, 1988; Schunk, 1990). But despite the commonalities of good practice, some interesting points of operational variability within these practices also emerged from the data.

Analysis of lesson observation data and subsequent interview data (with both teachers and students) supports the positive features of this dimension mentioned in the previous paragraph. Refer to Table 22 for measures of central tendency calculated for "all teachers" (on a 7-point scale) in relation to the five instructional strategies in the *Learning Goals* dimension.

Table 22: Learning goal instructional strategies

Instructional strategy	*M*	*SD*	Median	Mode	Range
Ensures that learning goal relates to students' strengths and needs	5.0	0.5	5.0	5.0	2.0
Sets a clear learning goal for the lesson	6.11	0.93	6.0	7.0	2.0
Involves students in the development and/or refinement of learning goal	4.56	1.67	5.0	3.0*	5.0
Differentiates the learning goal in relation to students' strengths/needs	4.22	1.2	4.0	4.0*	4.0
Ensures that students understand the learning goal	5.44	0.53	5.0	5.0	1.0

Note. *Multiple modes exist. The smallest value is shown.

It needs to be understood that goal orientation in this section mainly refers to teachers setting learning goals with and for their students, whereas it referred mainly to students setting learning goals for themselves in the *Self-regulation* section (**Section 6.2**).

The average mean score for all five strategies in the *Learning Goals* dimension was 5.07, placing it fifth in the ranked list of all eight dimensions of effective practice. This placement, however, is relatively unimportant when the minimal distance between the means of the top and fifth ranked dimensions (0.47) is considered. The mean for one instructional strategy ("sets a clear learning goal for the lesson") was considerably above the average mean and the mean for one other strategy ("differentiates the learning goal in relation to students' strengths and needs") was considerably below. One strategy ("sets a clear learning goal for the lesson") was also placed within the upper quartile of all ranked strategies with little variance in terms of teacher application.

But what are particularly interesting are the points of operational variability between teacher participants' implementation of some of the instructional strategies, as discussed below. Variability is particularly evident between the practices of those teachers whose students made the greatest learning gains over time and teachers whose students made lesser gains.

There was, for example, variability amongst teachers' capacity to involve their students in developing or refining learning goals. Although all teacher participants acknowledged in interviews the importance of this strategy, observations signalled considerably higher levels of proficiency by Teachers 5 and 8 than most other teachers in employing it. On a 7-point

scale, the average mean score for Teachers 5 and 8 was 6.5 for this instructional strategy, whereas it was 4.0 for all other teacher participants.

As an example of student involvement, Teacher 8 led his/her students skilfully toward working out what they had to do to be effective at writing recounts. From reading and discussing some exemplary texts, the students decided that quality recount writing required the writer to use "great words". The teacher consequently guided the students into expressing this concept as a learning goal:

Teacher:	*I'm hearing some of you talking about 'using powerful words', some of you talking about 'strong words. Who likes 'powerful' or who likes 'strong'?*
Students:	*Powerful. Strong.*
Teacher:	*Okay, shout either 'powerful' or 'strong' now.*
Students:	*Powerful.*
Teacher:	*Sounds like 'powerful'. Use powerful words for what?*
Student:	*To shape our writing.*
Teacher:	*Ooh, to shape our writing. Excellent. Okay, so I'll write up, 'To be able to use powerful words to shape our writing'. That's a great start but we can play round with this later if we want to...*

This contrasted with other teacher participants who shared learning goals with students as completed entities. Teacher 1, as a representative example, began a lesson by stating, "Today...in our writing...we are going to focus on two things. One, I want to focus on your planning of some writing...And the second thing I want you to look at is...creating for your readers a picture in their minds...really bringing that picture alive."

This point of variability suggests that the act of "involving students in the development and/or refinement of the learning goal" might be a significant variable within the *Learning Goals* dimension, just as the act of "involving students in the selection or construction of writing tasks" is significant within the *Learning Tasks* dimension (as discussed in **Section 5.2**). This appears to support the importance of "involvedness" as a key property of goal setting (and task setting) as suggested by other researchers (Ames & Archer, 1988; Latham & Locke, 1991; Schunk, 1990, 1996) in **Section 2.4.2**.

Another notable point of variability emerged from a close analysis of teachers' thinking (as expressed in interviews) about the nature or content of the learning goals they had developed.

All teacher participants recognised, primarily, that learning goals needed to align closely with learners' needs. Teacher 4 suggested, for example:

> [Learning goals] *come off* [students'] *needs...It's like you don't know what the kids are going to give you...you don't know where you are going...You look closely and you work out where you're going from their needs.*

When asked to prioritise the three most important contributors to an effective writing programme, six (out of nine) teacher participants nominated "using student needs to set learning directions" as one of their priorities, with five nominating it as their main priority.

But the particular point of variability between the teacher participants whose students made the largest learning gains and the other teachers lay in *how* both groups developed the content of learning goals.

Teachers 5 and 8 appeared to develop the content of learning goals primarily from the cognitive demands contained in the tasks that students were required to undertake. They attempted to identify the writing demands contained in tasks, develop learning goals around those demands, and inquire as to whether their students could meet those demands (according to learning needs identified from assessment data) as a means of deciding which goals to promote with which students. As Teacher 5 explained:

> *I think I know my kids' needs pretty well...so I always ask myself: What are the learning demands in our writing activities? What skills will they need? These...um...become our learning goals. But I also ask myself: Will my kids be able to do this? Now I...generally know that some kids can and some kids can't so I have to put a different emphasis on different goals for different kids depending on their needs. But I need to make sure that everyone can complete the task and feel good about it.*

On the other hand, several other teachers appeared to develop the content of learning goals primarily from analysis of student assessment data rather than analysis of learning task demands. This included both norm-referenced assessment data (such as asTTle results) and

day-to-day data from students' draft texts. As Teacher 3 explained, s/he analyses the students' writing "from the day before", thinks about "what they're saying to me and what they're doing", and sets learning goals "depending on what I notice". S/he added, "I then need to make sure that whatever we're doing...whatever writing tasks I come up with...will help the kids meet those needs." The emphasis of this conversation appeared to be more on addressing learning goals through tasks rather than completing tasks satisfactorily.

In addition, a variation in instructional patterns between these two groups of teachers emerged. In most lessons taught by teachers who primarily devised goals from analysed assessment data, lessons usually began with (often prolonged) discussion about the learning goal to be explored *prior to* discussion of the task to be undertaken, whereas in lessons taught by teachers who primarily devised goals from the nature of the learning task, lessons usually began with discussion about an anticipated writing task and its possible content before segueing into discussion of the aligned learning goal.

As the teachers who placed a particular emphasis on the writing task and its possible content at the beginning of instructional lessons were those whose students made the greatest learning gains over time, it is suggested that placing a stronger dialogic emphasis on the task rather than the learning goal at the beginning of teaching and learning episodes might be associated with greater learning gains in writing. This is an important finding in that it supports the foregrounding of *Learning Tasks* as a critical dimension (suggested in **Section 5.2**). It is also an important finding because of its apparent contradiction with researchers (mentioned in **Section 2.4.2**) who position goal orientation at the forefront of effective instruction (Black & Wiliam, 1998; Sadler, 1989).

With regard to the full set of *Learning Goals* instructional strategies, however, no overall association was apparent between high levels of teacher proficiency and teachers whose students made the greatest learning gains over time. For example, three other teacher participants scored higher for this dimension than the teacher (Classroom 5) whose students achieved the greatest learning gains. Refer to Table 23 for the mean of each teacher participant's summed proficiency level for all *Learning Goals* instructional strategies.

Table 23: Teacher participants' proficiency levels related to learning goal items

Teacher	Mean summed score for all instructional strategies
1	5.0
2	5.60
3	5.20
4	4.80
5	5.20
6	5.40
7	4.0
8	6.0
9	4.40

All teacher participants appeared to be able to set reasonably clear, specific and proximal learning goals that set sufficient challenge for students. All appeared to be reasonably proficient at making links between assessment and goal setting. But the variability demonstrated by teacher participants for two instructional strategies generates some interesting points of difference from these commonalities. It indicates that there is probably an important level of association between teachers' capacity to involve their students in learning goal formation and place a greater dialogic emphasis on task rather than goal development at the beginning of instructional lessons and their ability to generate positive outcomes for learners. It is suggested that more research needs to be undertaken on these operational points.

7.3. Expectations

The cohort of exceptional teacher participants in this study demonstrated satisfactory if not high levels of proficiency for most aspects of *Expectations* as an operational dimension. As a cohort, they scored considerably lower for *Expectations* than they did for almost all other dimensions. No instructional strategy for this dimension featured in the top quartile of all ranked instructional strategies and one ("holds a clear achievement vision based on national or local guidelines") ranked 51 from 52 ranked strategies.

Analysis of lesson observation data and (especially) interview data supports this conclusion. Refer to Table 24 for measures of central tendency calculated for "all teachers" (on a 7-point scale) in relation to the five instructional strategies in the *Expectations* dimension.

Table 24: Expectations instructional strategies

Instructional strategy	*M*	*SD*	Median	Mode	Range
Holds clear achievement vision based on national/local guidelines	3.0	1.0	3.0	3.0	3.0
Holds clear achievement vision based on analysed assessment data	5.33	0.5	5.0	5.0	1.0
Links vision to cross-curricular writing demands	4.89	1.54	5.0	4.0*	5.0
Communicates high expectations for attainment during lessons	4.89	1.05	5.0	5.0	4.0
Communicates high expectations through presentation of classroom	4.89	1.05	5.0	4.0	3.0

Note. *Multiple modes exist. The smallest value is shown.

The average mean score for all five strategies in the *Expectations* dimension was 4.6. This placed it seventh in the ranked list of all eight dimensions of effective practice. Furthermore, the score difference between the top and seventh ranked dimension (*Expectations*) was considerably greater (0.94) than the difference between the top and sixth ranked dimension (0.54).

Relatively low scores, however, could be the result of the data-gathering processes used for determining proficiency in this dimension. As expectations (held and communicated by teachers) are generally implied rather than stated in teaching and learning settings, information on them often needs to be inferred rather than observed. This can affect the precision of the results. This is especially the case when attempting to ascertain more generic expectations for achievement (at the student level) as opposed to more particular expectations for achievement (at the lesson level).

There was, in fact, limited evidence that teacher participants in this study held or communicated low or inappropriate expectations for achievement by their students despite the variable scoring pattern. When discussing (during the initial interview) possible reasons for student under-achievement in writing, most teachers (n = 8) implied that almost all students would be able to achieve at a satisfactory level if teachers made particular changes to their pedagogical actions and interactions with students. They seemed to suggest that teachers should expect their students to achieve at a satisfactory level. As Teacher 3 stated:

> *I expect all my students to be able to achieve...If they're not, I always look at myself...I always look at my teaching to see why they might not be achieving....If*

> *you're an effective practitioner, you should be able to identify weaknesses in your teaching and then the children's learning...and address that... There's got to be some accountability.*

Teacher 4 suggested that what is needed by teachers, in fact, is "love...It's the love of the writing...It's the love of each other. It's the love of...um...wanting to be successful". S/he added that under-achievement is also about:

> *Respect for the children, which a lot of teachers don't have...for all the students in their class... And when they do have it, it's not for everyone. It's sometimes selective...um, almost an automatic acceptance of second-best for some students...*[The teachers] *probably don't realise that they're even doing it sometimes.*

Most teacher participants appear to concur with Teacher 9 when s/he stated, "I have high expectations...that everyone is a writer. We just haven't found the right way, maybe, before."

Furthermore, through lesson observations, there were not any instances (verbal or non-verbal) noted of teacher participants explicitly or implicitly communicating that expectations for achievement were low, inappropriate or unachievable. A satisfactory (if slightly variable) degree of task challenge and instructional scaffolding (including demonstrating) was evident in all observed lessons, including writing lessons that emanated from curriculum areas other than English. Refer to **Section 5.3** for illustrations and discussion of teachers applying the appropriate degree of task challenge and instructional scaffolding. The implied message (reinforced through some classroom displays of quality texts) seemed to be that all students were expected to achieve at a level exceeding their current level of achievement.

As signalled by the measures of central tendency contained in **Table 24**, teacher participants appeared to generate their expectations for student achievement more from analysed assessment data than from national or local curriculum guidelines. Whereas almost all teacher participants (n = 8) stated (in interviews about goal-setting) that they primarily consider their students' learning needs when ascertaining "what to teach", only two (Teachers 2 and 5) mentioned national or local curriculum guidelines when discussing the same.

Overall, there was again a reasonably high level of homogeneity amongst the summed proficiency levels calculated for most teacher participants on this dimension. With the exception of the teacher whose students made the greatest learning gains over time (Teacher 5), the summed mean score calculated for each teacher was within 0.8 of the overall mean (4.6) for all teachers. The only area of operation in which Teacher 5 significantly exceeded other teachers was his/her capacity to "communicate high expectations for attainment during lessons". This may reinforce the importance of this instructional strategy as a necessary component of effective literacy practice. Refer to Table 25 for the mean of each teacher participant's summed proficiency level for all instructional strategies within the *Expectations* dimension.

Table 25: Teacher participants' proficiency levels related to expectations items

Teacher	Mean summed score for all instructional strategies
1	4.6
2	5.0
3	4.2
4	3.8
5	6.0
6	4.2
7	4.0
8	4.6
9	5.0

Within the context of this study, there appeared to be minimal statistical links between teachers' overall proficiency within the dimension of *Expectations* and positive outcomes for learners. But the research literature (summarised in **Section 2.4.1**) signifies the importance of this dimension in relation to teachers generating higher than anticipated learner gains (Brophy, 1983; Cooper & Good, 1983; Good & Brophy, 1997; Miller & Satchwell, 2006; Rubie-Davies, 2010; Timperley & Phillips, 2003).

Operationally, aspects of this dimension were clearly evident across the practice of this exceptional cohort of teachers. They appeared to hold and communicate appropriately high expectations for student achievement generally and for student attainment during particular instructional lessons. They principally communicated them through the strategic use of precise learning goals, challenging learning tasks and especially the outputs of their active and receptive demonstrating. But there was variability in how they generated their expectations, particularly for attainment during particular lessons. Analysed assessment data appeared to be more important to them than national or local curriculum guidelines. There

was insufficient empirical evidence to specify how they generated expectations for achievement beyond particular lessons.

7.4. Engaging and challenging students

The exceptional cohort of teacher participants in this study demonstrated some strong commonalities of effective practice for several aspects of *Engaging and Challenging Students* as described in the research literature (refer to **Section 2.4.6**). They also demonstrated variable levels of proficiency for some aspects. The strongest commonality related to teachers being able to attend proficiently to their students' differentiated learning needs. The main area of variability related to a lack of specificity amongst teachers on making links for students between the expected outcomes of particular tasks and long-term expected outcomes.

Analysis of lesson observation data and subsequent interview data (with both teachers and students) supports this pattern of strengths and variabilities. Refer to Table 26 for measures of central tendency calculated for "all teachers" (on a 7-point scale) in relation to the nine instructional strategies in the *Engaging and Challenging Students* dimension.

Table 26: Engaging and challenging student's instructional strategies

Instructional strategy	*M*	*SD*	Median	Mode	Range
Challenges student cognition through the task	5.44	1.33	6.0	6.0	4.0
Elicits widespread learning-focused participation	5.11	1.27	6.0	6.0	3.0
Ensures continual and direct student engagement in task	5.22	0.97	5.0	5.0*	3.0
Promotes concept of 'being strategic' as a cognitive asset	5.22	0.97	5.0	5.0	3.0
Promotes concept of 'risk taking' as a cognitive asset	4.78	1.09	5.0	5.0	4.0
Attends to differentiated learning through small group instruction	6.22	0.83	6.0	7.0	2.0
Differentiates use of instructional approaches and strategies	4.78	1.39	5.0	5.0	5.0
Ensures that text generated or skills practiced are at appropriate level	4.56	1.24	5.0	4.0*	4.0
Checks that students understand how task links to anticipated learning	3.67	1.41	3.0	3.0	4.0

Note. *Multiple modes exist. The smallest value is shown.

The average mean score for all nine strategies in the *Engaging and Challenging Students* dimension was 5.0, giving it sixth placement in the ranked list of all eight dimensions of

effective practice. This ranking, however, is relatively unimportant in that the difference between the top and sixth ranked dimensions is reasonably small (0.54) when compared with the difference between the top and seventh ranked (0.94) and especially the top and eighth ranked (1.76) dimensions.

The mean for one instructional strategy in the dimension ("attends to differentiated learning through small group instruction") was considerably above the average mean and the mean for one other strategy ("checks that students understand how task links to anticipated learning") was considerably below. The highest ranked strategy was the only strategy from this dimension to be placed in the upper quartile of all ranked instructional strategies. The very high ranking (along with the low variability of teacher scores) for "attending to differentiated learning through small group instruction" suggested strongly, in fact, the importance that this cohort of exceptional teacher participants places on interacting differentially with students (as individuals and small groups) during instructional writing so as to engage them in writing tasks.

A discussion of how teachers have interpreted and operationalised this instructional strategy as a contributor to learning engagement is particularly important because (as reported in **Section 2.4.6**) researchers have noted that the concept of grouping for instruction is relatively new to some teachers of older primary-age students (Worthy et al., 2009). Even most (n = 5) of the cohort of exceptional teachers in this study self-reported (through interview) that "grouping for instruction" for writing is an instructional strategy "needing work".

Through interview, all teacher participants expressed some commitment to implementing differentiated instruction. All recognised that their students had varying and changing learning needs that could not always be addressed at the large group level. As Teacher 6 stated:

> *I've got....almost beginning writers through to some really quite advanced writers in my class this year. One size just doesn't fit all....I have to look for ways of doing things that allow each of my kids to learn or make progress at their own level....Otherwise I'm going to lose some of them....and I don't just mean my target [under-achieving] kids...*

Teacher 6 recognised that differentiated instruction was necessary to engage students at their own motivational or cognitive level.

This commitment to differentiated instruction manifested itself largely through the strategic implementation of diverse small group (rather than whole class) teacher-student interactions during instructional writing periods. This approach was indeed evident in each of the 31 observed writing lessons for at least a portion of instructional time. Sometimes it was evident through the teacher interacting with a group of under-achieving students near the start of the lesson so as to guide them on how to begin the assigned task; sometimes during the lesson as the teacher interacted with groups of students who were brought together to solve text formation problems that had emerged from their previous writing or to share and discuss their writing with each other; and sometimes through the teacher roving the room and interacting with individual students, pairs of students or groups of students as other text formation issues arose.

Observed lessons lasted for varying time periods. As reported previously (page 157), they ranged from approximately 50 minutes to approximately 80 minutes. But, on average, time allocated to differentiated instruction was nearly three-quarters of each lesson. This ranged from approximately 15% of one lesson to approximately 95% of another.

Two particular points of interest (relating to group composition and the use of differentiated instructional strategies) emerged from observations of differentiated instruction across the study.

Grouping for instruction was principally "flexible" (rather than "ability" based) in nature (refer to page 53 for an explanation of these terms). Although some teachers (n = 4) stated that they had formed "writing groups" (based on norm-referenced assessment data) at the beginning of the year or term, there was minimal evidence that these pre-determined writing groups operated as long-term instructional groups. As mentioned, sometimes teachers worked with their most under-achieving group near the start of lessons so as to guide them on how to begin the writing task. But even the composition of these groups varied, according to whom teachers believed needed particular guidance for a particular task. Instead, teachers tended to select students for instruction according to identified learning needs rather than ability levels. Such an approach to differentiated instruction is what Tomlinson (2003) describes as "responsive instruction" (p. 2). Teacher 5 explained his/her operation of this approach:

I've tried formal grouping before but I just....I've found that it's quite hard for me to manage, so I've found that it's easier if I set...if I've identified some kids who have some particular needs and I pull them together as a group....I work with them as the others are working independently....and the others know they can't interrupt me....But the kids in each of my groups are....umm....changing all the time.

But, although most teacher participants stated a commitment to interacting with all of their students in small groups over a manageable period of time, there was no evidence (during the 31 observed lessons) of teachers forming instructional groups that focused on the particular needs of high-achieving students. Several teachers (n = 4) stated that they did form such groups from time to time but others expressed some concern that most of their differentiated instructional time was allocated to low-achieving students.

When asked about their use of differentiated instructional strategies for groups with varying learning needs, all teacher participants stated, and (to varying degrees) demonstrated, a commitment to this. As a representative example, Teacher 3 explained how s/he differentiated instructional strategies, particularly when interacting with under-achieving students:

My target kids need a lot more support than the others….More modelling….more writing together…they quite like it if we have a modelling book and we each write something in it….I have to work in much smaller chunks with them than the others….I have to be more deliberate….use my think-alouds more….I also have to push the speed of the lesson more with these kids.

On the other hand, s/he explained that the main instructional approach used with higher-achieving students was "discussion around items…sharing of their items….They can usually get ideas from this, but my other kids often have to be shown how". S/he concluded that "my target kids mostly have to work more at the word and sentence level…[whereas] most of my others are usually able to work at the paragraph or whole-text level".

Whatever approach to differentiated instruction teacher participants took, they all implied (to some degree) that differentiated instruction was an effective instructional process for engaging and challenging students at their own motivational and cognitive level as developing writers. It is worth recalling Teacher 6's small group writing lesson (on the topic of diving into water from a great height) described on pages 154 to 159. Having undertaken

collaborative writing with a group of under-achieving boys for 30 minutes, the teacher suggested that s/he "would've lost these kids from writing" if s/he had not worked with them closely as a small group. S/he added that "they just give up, and they feel bad about themselves enough as it is..." The teacher explained further the flexibility of his/her instructional work with students:

> *I cannot plan from one day to the next exactly how much help some kids are going to need.…how much they've got a concept….my weekly planning is based around needs coming up….I might work with a group for three sessions in a row then think, 'Gee I've got to see my top kids now'….Um, you know, I might even end up seeing three groups in a day….Or I may just do individual conferencing for a whole week.*

There is, in fact, a reasonably high level of homogeneity amongst the summed proficiency levels calculated for most teacher participants for most instructional strategies in this dimension, including "engaging students through differentiated instruction". The summed mean score calculated for each teacher is within 0.89 of the average mean (5.0) for all teachers. As with most other dimensions, the teachers whose students made the most and least achievement gains over time scored somewhat higher or lower, respectively, than the overall mean score. But the differences were not significant. Refer to Table 27 for teacher participants' summed proficiency levels for all *Engaging and Challenging Students* instructional strategies.

Table 27: Teacher participants' proficiency levels related to engaging and challenging students items

Teacher	Mean summed score for all instructional strategies
1	4.56
2	5.44
3	4.88
4	4.11
5	4.88
6	5.88
7	4.56
8	5.55
9	5.11

This reasonably high level of homogeneity suggests little evidence of any direct association between proficiency levels achieved by particular teacher participants and positive outcomes for learners in writing. However, the overall importance of teachers attending to their students' learning needs through well organised and managed differentiated instruction

is signalled and reinforced clearly through findings across this dimension. It is useful to be able to describe and discuss how this cohort of exceptional teachers operationalises this particular dimension as it is arguably the dimension that is practised most variably by "more typically performing" teachers, as signalled in **Section 2.4.6**. In addition, the overall importance of teachers engaging their students by providing a series of cognitive challenges and generating widespread engagement in learning tasks has been well illustrated throughout the study.

Chapter 8: Conclusion

The purpose of the research study was to identify and describe those features of teachers' instructional practice that are critical for generating greater than anticipated gains in writing for Year 5 to 8 learners, particularly within the New Zealand context. This includes greater than anticipated gains for learners most at risk of under-achieving.

A number of sources (including classroom observations and interviews) were used to gather, aggregate and analyse data about pedagogy from a small but purposefully selected set of exceptional teacher participants (and their students) over 15 months. Teachers were regarded as exceptional at the point of selection because they could demonstrate a superior capability to promote positive learning outcomes for their students.

The observational data were analysed in relation to an *a priori* framework of variables based on a critical reading of research-based literature on effective literacy practice. They were also analysed in relation to a set of norm-referenced achievement information from each teacher, indicating gains by their students over time. Findings, as reported in **Chapters 4 to 7**, have been presented through both quantitative and qualitative datasets and illustrations.

The study is based on four inter-related theoretical concepts: that what teachers do (as well as what they know and believe) affects learner gains (Alton-Lee, 2003; Darling-Hammond, 1999; Hattie, 2003); that teacher reflection about their own practice is influenced by their perception of exemplary practice (Berliner, 2001, 2004; Block & Mangieri, 2003; Bond et al., 2000; Medwell et al., 1998; Shulman, 1987); that learner gains can be empirically measured (Chetty et al., 2011; Hanushek, 2000; Pianta & Hamre, 2009); and that what teachers need to do in order to generate higher than anticipated learner gains can be defined (Alton-Lee, 2003; Darling-Hammond, 1999; Palardy & Rumberger, 2008). What this research adds to these four concepts (as presented in **Chapters 1 and 2**) forms the basis of this study.

Another foundation for the study has been other researchers' findings about the features of effective writing instruction (as outlined in **Chapter 2**) so that results are presented not only as inferences from classroom observations and interviews but also as points of comparison (agreement, contradiction, omission) with others' conclusions, especially in **Chapters 5, 6** and **7**. It is anticipated that the findings of this study will add to the emerging research

literature on effective pedagogy within the context of writing. Recent reports of significant under-achievement in writing by middle-school learners (refer to **Chapter 1**) reinforce the urgency of adding new perspectives to the literature from a range of sources.

8.1. Major findings

Five principal inter-related findings about effective writing instruction emerge from the quantitative and qualitative data in this study.

8.1.1. Finding 1: That all identified dimensions of effective practice and instructional strategies are critical to the operation of effective writing instruction.

It was hypothesised early in the study that strategic and proficient implementation of all dimensions of effective practice and related instructional strategies identified from the research literature would be critical to generating greater than anticipated learner gains in writing (Block & Mangieri, 2003; Gambrell et al., 2007; Hall & Harding, 2003; Langer, 2001; Medwell et al., 1998; Pressley et al., 1998).

However, the literature also indicated that pedagogical effectiveness meant integrating all dimensions and strategies through classroom practice. No dimension or strategy should be regarded as a discrete pedagogical entity. Its apparent effectiveness may well be contingent on its inter-connectedness (to varying but unknown degrees) with other dimensions and strategies within the same pedagogical context (Hall & Harding, 2003; Hillocks, 1986; Marzano, 1998; Parr & Limbrick, 2010).

The overall finding that emerges from the study supports this hypothesis. A synthesis of results from analysed quantitative and qualitative data (reported in **Chapters 4** to **7**) indicates a cohort of exceptional teachers who have generated positive writing outcomes from their students (to varying degrees) through the strategic and proficient implementation of all identified dimensions of effective practice and related instructional strategies in combination with each other. This involves all teachers *engaging, motivating and challenging* their students through *purposeful and authentic writing tasks* which are operationalised through *clear, direct and differentiated instruction.* For instruction to be effective, this also involves teachers *conversing and responding meaningfully* with students about their writing based on *high expectations* that have been communicated clearly. The aim of the teacher is ultimately to guide their students toward *literacy independence* within the parameters of a *goal-oriented* and *well organised and managed classroom and programme.*

This summary of effective writing instruction, based on strategic and proficient integration of all inter-related dimensions and strategies, represents all exceptional practitioners in this study. Each of the teachers scored reasonably similar levels of high operational proficiency across dimensions. The richness of their practice is represented in the descriptions of effective pedagogy that have been presented.

8.1.2. Finding 2: That some dimensions of effective practice are more closely associated than others with positive learner outcomes in writing.

It was also hypothesised early in the study that some dimensions may be more closely associated with positive outcomes for students in writing than others (Alton-Lee, 2003; Grossman et al., 2013; Hattie, 2003; Medwell et al., 1998). As indicated in **Chapter 4**, these might be regarded as foreground dimensions in that they appear to be associated more strongly than others with (for example) learner gains, learner engagement or decreased achievement variance. This suggests that they need to be at the forefront of effective practice.

Within the context of this study, a range of dimensions emerge as potentially foreground dimensions. As reported in **Chapter 4**, correlations of operational proficiency and student achievement data indicate significant levels of association between the proficient operation of *Learning Tasks* and *Direct Instruction* and the acceleration of learner gains over time. They also suggest significant levels of association between *Self-regulation*, *Responding to Students* and *Organisation and Management* and the decrease of achievement variance over time. These five dimensions of effective practice are nominated as foreground dimensions.

But there is no evidence within the study that attending pedagogically to these dimensions as discrete entities affects learner gains or decreased variance directly. Instead, proficient application of them appears to be critical within a learning context of all dimensions being applied in an integrated and flexible way. There is some evidence of strong association between the effective integration of some dimensions with others—for example, there is a significant correlation between *Learning Tasks*, *Learning Goals* and *Direct Instruction*, and between *Self-regulation* and *Expectations* (refer to Table 11). But it is not suggested that the effective operation of *Learning Tasks* as a dimension is contingent only on the effective operation of *Learning Goals* and *Direct Instruction*; nor that the effective operation of *Self-regulation* is contingent only on the effective operation of *Expectations*. As cited from Hall & Harding (2003) previously, "There simply is no one single critical variable that defines outstanding instruction" (p. 4).

It is difficult to compare this nominated list of foreground dimensions with findings about critical dimensions in the eight key research studies that underpin this study (Gilbert & Graham, 2010; Graham & Perrin, 2007; Hall & Harding, 2003; Langer, 2001; Medwell et al., 1998; Parr & Limbrick, 2010; Pressley et al., 1997; Pressley et al., 1998). This is because data in each study were gathered and analysed in diverse ways.

But, as all studies have a common intent, it is interesting to make some tentative comparisons. Using a process of content analysis and synthesis across the eight research studies, it was possible to determine the proportion of positive commentary attributed to each dimension of effective practice in each study. This generated a ranked list of dimensions across the studies: *Direct Instruction* (23% of all positive comments), *Organisation and Management* (18%), *Learning Tasks* (16%), *Engagement and Challenge* (14%), *Self-regulation* (12%), *Responding to Students* (7%), *Expectations* (6%) and *Learning Goals* (3%). This list reinforces (albeit tentatively) the probability of *Direct Instruction*, *Learning Tasks* and *Organisation and Management* being regarded as foreground dimensions in this study. But the importance attributed to *Self-regulation* in this study (as discussed in **Chapter 6**) contrasts with the more variable attention that other researchers give to it (Graham & Harris, 1997; Zimmerman & Risemberg, 1997). This possibly signals that further investigation into the concept of self-regulation as a key generator of positive learner outcomes in writing (given that all other dimensions of effective practice are operationalised proficiently) is warranted.

8.1.3. Finding 3: That there is a strong alignment between teacher proficiency and learner gains in the operation of effective writing instruction.

It was also hypothesised early in the study that there would be an alignment between teacher proficiency and learner gains. This is suggested by the theoretical concept that "what teachers do affects learner gains" (Alton-Lee, 2003; Darling-Hammond, 1999; Hattie, 2003). A range of researchers have calculated such an alignment over time, especially a relationship between high levels of teacher proficiency and strong learner gains (Darling-Hammond, 1999; Palardy & Rumberger, 2008; Pianta & Hamre, 2009).

Again, evidence emerges in this study to support this hypothesis. Teacher proficiency and learner gain results reported in **Chapter 4** indicated the overall alignment between relatively high mean operational proficiency levels achieved by almost all teacher participants and greater than anticipated learner gains in almost all classrooms. This was indeed predicted because of the exceptional nature of the teacher cohort.

But, of greater interest, is the relatively strong alignment (77.7%) between rankings of teacher proficiency levels and rankings of learner gains (as also reported in **Chapter 4**). Despite limited differences between each teacher's overall proficiency level and each teacher's overall set of learner gains, an interesting pattern of operational proficiency emerges when an alignment between these rankings is calculated. Not only do the teachers whose students made the greatest learning gains achieve the highest proficiency scores (especially Teachers 5, 6 and 8) but they score considerably higher than others for some key foreground dimensions, especially *Learning Tasks* and *Self-regulation*. In addition, there is a significantly wider difference between the two highest scoring teachers (Teachers 5 and 8) and the other teachers for *Self-regulation* than there is for any other dimension. The difference of 1.2 (on a 7-point scale) is three times greater than the next equivalent difference (0.4 for *Learning Tasks* and *Expectations*). These calculations suggest the importance of interrogating closely the operational practices of the highest scoring teachers within dimensions (especially *Self-regulation*) when their proficiency levels align strongly with learner gains.

8.1.4. Finding 4: That some instructional strategies are more closely associated than others with positive learner outcomes in writing.

As predicted in **Chapter 2**, particular instructional strategies emerge from the context of this study as being more strongly associated with positive learner outcomes in writing than are other instructional strategies. Some emerge as a result of quantitative analysis. They may, for example, be associated statistically with learner gains or decreased learner variance. But most emerge through qualitative analysis, especially from the classroom practice of teacher participants whose high operational proficiency levels align strongly with learner gains.

The strategic and proficient operation of *all 52 instructional strategies* in the content analysis matrix (**Appendix B**) is arguably critical for effective writing instruction. This is because they are all associated with the outcome of generating significantly higher than anticipated gains amongst students. As exemplified in **Chapters 5, 6** and **7**, the 52 instructional strategies can be regarded collectively as a repertoire of strategies that effective teachers of writing need to utilise consistently. But within the repertoire, some instructional strategies might be regarded as *foreground strategies*, just as some dimensions of effective practice are described as foreground dimensions.

However, like the foreground dimensions, none of the nominated instructional strategies should be regarded as discrete pedagogical entities. In order to be effective, they need to be operationalised as part of an integrated whole of instructional strategies. It may be that they are effective only in combination with other strategies and in particular pedagogical contexts (Hall & Harding, 2003; Hillocks, 1986; Marzano, 1998; Parr & Limbrick, 2010).

The following is a summary of the nominated foreground instructional strategies in this study; that is, those that appear to be most closely associated with the effective teaching of writing by very effective teachers. They link principally with three foreground dimensions: *Learning Tasks*, *Direct Instruction* and *Self-regulation*.

8.1.4.1 Learning tasks

Two instructional strategies within the *Learning Tasks* dimension emerge as foreground strategies in that the levels of operational proficiency that teachers achieved for them correlate significantly with learner gains. As previously suggested, there is significant potential for error when making multiple correlational calculations, but the quantitative findings are supported by strong qualitative evidence. They signify the need for teachers to:

- select or construct learning tasks that students can identify as purposeful, and
- involve students in selecting and/or constructing learning tasks.

As described in **Section 5.2**, attending effectively to task purposefulness involves teachers ensuring that their students hold interest in the content of tasks, link expected outcomes of tasks to their prior knowledge, interests or experiences, and value the learning that is inherent within tasks (Ames, 1992; Blumenfeld, 1992; Lodewyk & Winne, 2005; Lodewyk et al., 2009; Paris & Winograd, 1990; Wigfield & Eccles, 1992). Almost all teachers in this study exemplified this by enabling their students to write principally from personal experiences, interests or their current content knowledge-base, or encouraging them to undertake a range of writing process tasks that they understood were needed for successful text composition.

In addition, teachers whose high proficiency levels aligned closely with high learner gains promoted task purposefulness by placing a greater dialogic emphasis at the beginning of lessons on the task that drives the lesson, rather than the goal that underpins it. This links with a belief that the primary purpose of writing instruction is for learners to construct

meaning in texts rather than merely build writing strategies and skills (albeit as a means of constructing meaning) (Allington & Johnston, 2000; Johnston, 2012; Wilkinson & Son, 2010). Learners construct meaning through the task that they undertake, whereas they build skills and strategies through the learning goals that underpin the task.

Another means of promoting task purposefulness involves teachers encouraging their students to select or construct their own writing tasks so as to enhance learner ownership of them (Ames, 1992; Blumenfeld, 1992; Marshall & Weinstein, 1984; Paris & Winograd, 1990). Although the correlational data in **Section 5.2** indicated that this is a significant feature of effective writing instruction, there was variable evidence (in the same section) of teacher participants promoting "authentic" student involvement in the selection or construction of writing tasks. Most provided some choice of topic selection within broad and open-ended learning tasks, but only one (Teacher 8) involved students fully in the construction of a learning task. In addition, only one teacher (Teacher 4) differentiated learning tasks for full student involvement.

Nicholls (1984) concluded that "when individuals are task involved, they see more effort as leading to more mastery and higher ability" (p. 332). In an unpublished dissertation on the effects of topic choice and teacher prompts on third-grade student writing, Sullivan (2008) concluded that students prefer to write about and are more engaged in writing topics that they select rather than prompts that are provided by the teacher. As pedagogical actions related to task purposefulness and learner involvedness are signalled as significant features of effective writing instruction, yet are operationalised variably by teachers in this study, it is suggested that their proficient operationalisation be regarded as a developmental step required by some teachers.

8.1.4.2 Direct instruction

Two instructional strategies from the *Direct Instruction* dimension emerge as foreground strategies in that they appear to be very strongly associated with teacher participants who scored higher than others for the dimension and whose students made the greatest learning gains. Within a writing lesson, they signify the need for teachers to:

- demonstrate or explain clearly what students are expected to do, and
- question students effectively.

As discussed in **Section 5.3**, demonstrating is the pedagogical feature of direct instruction that teachers utilised most widely in this study. This supports findings made by a range of researchers about the importance of demonstrating in literacy teaching (Aulls, 2002; Englert et al., 1991; Knudson, 1990; Purcell-Gates et al., 2007; Schunk, 2003; Smagorinsky, 1992). But the research literature focuses on two distinct modes of demonstrating—active demonstrating (whereby the teacher composes texts collaboratively with students as a means of instruction) and receptive demonstrating (whereby the teacher instructs from previously composed texts). The literature appears, however, to be divided on the advantages and disadvantages of each mode as a means of direct instruction (refer to **Section 2.4.4**). The findings of this study indicate a stronger association with active (rather than receptive) demonstrating. There is a particularly strong alignment between teachers whose students have made the greatest learning gains and the application of active demonstrating as an instructional tool. This links with the findings of a range of researchers (featured in **Chapter 2**) who argue strongly for the benefits of direct and explicit teacher-learner collaboration in constructing models of expected learning outcomes in writing (Aulls, 2002; Block & Israel, 2004; Cremin & Baker, 2010; Englert et al., 1991; Fidalgo et al., 2008; Regan & Berkeley, 2012; Schunk, 2003; Schunk & Zimmerman, 2007; Smagorinsky, 1992).

Another important finding emerged from an analysis of teacher participants' discourse with students during episodes of direct instruction, as also discussed in **Section 5.3**. During text-related discourses, teachers whose students made the greatest learning gains asked three times as many high cognitive demand questions of their students as other teachers, whether discoursing with the class, groups of students or individual students. Refer to **Chapter 5** (p. 145) for a definition of high cognitive demand questioning. This suggests that teacher questioning for deep, metacognitive, text-related thinking is closely associated with positive learner outcomes in writing. Not only does this finding match the findings of several researchers who have explored the significance of rich questioning and responding within the domain of literacy instruction (Dyson, 2002; McCarthey, 1994; Nystrand et al., 1998; Nystrand et al., 2001) but it also supports the hypothesis (given in **Chapter 2**) that there would be strong links between high quality teacher discourse and higher than anticipated learning gains in this study.

8.1.4.3 Self-regulation

As *Self-regulation* is the dimension of effective practice that most differentiates the operational proficiency of teacher participants whose students made the greatest learning

gains from the proficiency level of other teachers, it is useful to examine the pedagogical actions of higher scoring teachers in some detail and reflect on their implications for effective writing instruction. Examining their actions (in relation to other teachers' actions) suggests that four instructional strategies within this dimension emerge as foreground strategies. They signify the need for teachers to:

- give time and opportunities for their students to write on self-selected topics;
- encourage their students to write outside writing instructional time;
- provide opportunities for students to work collaboratively; and
- encourage their students to take responsibility for seeking support.

As confirmed by the research literature that is discussed in **Section 2.4.8**, pedagogical actions that lead to these outcomes appear to be important features of effective writing instruction. They are important as significant means of promoting engagement and independence amongst students as developing writers (Borkowski, 1992; Paris & Winograd, n.d.; Perry & Drummond, 2002; Perry & VandeKamp, 2000; Schunk & Zimmerman, 2007; Zimmerman, 1990).

Within this study, this is particularly illustrated (in **Section 6.2**) by teachers utilising pedagogical actions that lead to students maintaining a "writer's notebook" in which they record possible writing topics for independent writing, deciding which process tasks they need to undertake in order to craft and re-craft texts and what assistance they need to complete tasks effectively, accepting diverse opportunities to write collaboratively with others, and selecting outlets (such as class blogs) in which they can present their independent writing.

The significance of some of these strategies (especially those related to the concept of ownership) is signalled further by their probable statistical correlation with decreased achievement variance over time (refer to **Section 6.2**).

8.1.4.4 Other dimensions

One instructional strategy (from the *Learning Goals* dimension) emerges from the other dimensions of effective practice as a foreground strategy with more certainty than others. This is again because of its particular association with teacher participants whose students

made the greatest learning gains over time. As discussed in **Section 7.2**, it signifies the need for teachers to "involve students in the development and/or refinement of learning goals". This means guiding rather than directing students into recognising what is needed to be successful as developing writers (Ames & Archer, 1988; Latham & Locke, 1991; Schunk, 1990, 1996). The emergence of this strategy as a foreground strategy reinforces the concept of learner involvedness as a key feature of effective writing instruction. Just as the pedagogical act of involving students in the selection of writing tasks emerged as an important strategy of the *Learning Tasks* dimension, so involving them in the development of learning goals emerges as an important strategy of the *Learning Goals* dimension.

A related point of variation between the teachers whose students made the greatest learning gains and other teachers involves the former group ensuring (more than others) that learning goals linked closely with literacy demands inherent within writing tasks. All teachers recognised that learning goals needed to align closely with learners' needs, but teachers whose students made the greatest learning gains recognised to a greater extent that the content of learning goals needed also to align closely with the cognitive challenges contained within tasks.

But several other instructional strategies (from the *Responding to Students* and *Organisation and Management* dimensions) emerge *potentially* as foreground strategies. They signify the need for teachers to:

- use a range of ways to affirm and/or respond to students' efforts and comments;
- break lessons into easily identifiable stages;
- set manageable time allocations during lessons; and
- provide sufficient opportunities for students to develop and practise writing skills during lessons.

Although the importance of these strategies is signalled through exemplary classroom practice, their significance was initially signalled by their probable statistical correlation with decreased achievement variance over time (reported in **Sections 6.3** and **6.4**). The probability (rather than certainty) of these correlations marks these as *potential* foreground strategies.

No instructional strategy from the other dimensions of effective practice (*Expectations, Engaging and Challenging Students*) emerges as a foreground strategy from the quantitative and qualitative data that have been analysed for the study, especially through the alignment of teacher proficiency levels with learner gains. But this does not imply that strategies within those dimensions—or indeed any strategies that have not been nominated as foreground strategies—are less important than others with regard to generating higher than anticipated learner gains.

As discussed previously, positive learner outcomes in writing are contingent on the strategic, proficient and inter-related implementation of all instructional strategies within the context of authentic teaching and learning episodes. But it emerges that some of the 52 instructional strategies contained in the content analysis matrix (**Appendix B**) appear to be more closely associated with positive learner outcomes in writing than others. As such, their operationalisation within classroom contexts needs to be considered particularly closely.

8.1.5. Finding 5: That the dimensions and strategies of effective pedagogy needed for success by learner cohorts most at risk of under-achievement are those needed for success by all learners.

For this study, students most at risk of under-achievement were deemed to be boys and all students whose rate of progress was substantially behind their expected rate at time one (T1) of the data-gathering process. As noted previously (in **Chapter 3**), it became too difficult to make conclusions about the progress of Māori and Pasifika learner cohorts as low participant numbers made it problematic to make valid inferences or generalise from conclusions.

When quantitative (and some qualitative) data for boys and under-achievers were aggregated and analysed, it became evident that what is suggested as effective pedagogy for *all learners* is particularly effective pedagogy for these two cohorts. This links with the conclusion that diverse researchers have made about ways of addressing literacy under-achievement by low achieving students as a means of lifting their engagement and achievement levels (Allington, 2002; Flowers, 2007; McNaughton, 2002; Perkins & Cooter, 2005; Strickland, 1994). What is good for some is good for all.

There was, however, some differentiation of pedagogical strategies for these cohorts in some classrooms, especially in classrooms where boys and under-achievers made greater progress than *all learners* (refer to **Tables 2, 3 & 4**). This resulted in some teachers

developing aspects of what some researchers refer to as "culturally responsive practice" (Banks et al., 2005, p. 243).

As discussed in **Section 5.2**, differentiation of strategies (especially for boys) mainly involved teachers attempting to select writing tasks and topics that engaged the interest of their culturally diverse learners (Hefflin, 2002; Turner 2005). As discussed in **Section 5.3**, it also involved teachers adopting instructional practices (especially direct and explicit demonstrating, questioning and explaining) that are particularly designed to generate high literacy achievement by under-achieving students (Chalk, Hagan-Burke, & Burke, 2005; Graham, Harris, MacArthur, & Schwartz, 1991; Perkins & Cooter, 2005; Walker-Dalhouse, 2005). This included, for example, the strategic use of receptive demonstrating (rather than active demonstrating) as a means of teaching non-fiction writing, often the preferred writing mode of boys (Knudson, 1990; Purcell-Gates et al., 2007).

But it is worth reiterating that a balanced and proficient implementation of all dimensions and strategies of effective pedagogy is essential if higher than anticipated gains are to be made by under-achieving students. There is, however, some evidence that this is not sufficient. Just as some dimensions and instructional strategies are regarded as foreground dimensions and strategies for success by all learners as a cohort, it may be that some dimensions and instructional strategies (related mainly to *Learning Tasks* and *Direct Instruction*) are regarded as foreground dimensions and strategies for success by under-achieving students. But there is no evidence (for example) that teacher proficiency in being strategic about topic selection as a discrete strategy generates learner gains by under-achieving students—proficiency in this strategy is contingent on proficiency in delivering all dimensions and strategies in combination with each other.

Any conclusions, however, that might be made on the reported progress of boys and under-achievers and associated instructional strategies become confused by having to reflect on the statistical phenomenon of *regression to the mean* as a possible explanation for the accelerated progress of these learners. Continuing investigation needs to be undertaken on exploring literacy pedagogy required for success by under-achieving learners, especially boys.

8.2. Limitations

A key goal of any research study that aims to identify and describe effective pedagogy is to ensure that a reasonable level of generalisability can be made from the findings (Creswell &

Plano Clark, 2011; Miles & Huberman, 1994; Tashakkori & Teddlie, 1998). Within the context of this study, generalisability means being able to transfer findings about effective literacy pedagogy from a specific population (nine effective teachers of writing working with typically performing Year 5 to 8 learners in a New Zealand context) to a theoretical population (all teachers of writing working with typically performing Year 5 to 8 learners). This could be deemed to be a limitation in that transfer might arguably be not possible for some (typically performing) teachers without appropriate levels of professional support. However, with such support (around operational proficiency for all dimensions of effective practice and instructional strategies in combination with each other, but especially those nominated as foreground dimensions and strategies), the researcher suggests that this limitation could be addressed.

Other limitations mostly link to the study's primary dependence on qualitative data-gathering methods (principally observations and interviews) and related personnel and time resource issues.

In their discussion of actions that can be taken if research conclusions and inferences are to be considered reliable and valid, Tashakkori & Teddlie (1998) mentioned the need for "prolonged engagement" with participants and "persistent observation" of them (p. 90). Because of time constraints, "prolonged engagement" and "persistent" observations were not logistically possible.

As reported in **Chapter 3**, 31 writing lessons of approximately 60 minutes' duration were observed over the data-gathering period. This meant that most teacher participants were observed at least three times. Although three lengthy observations is sufficient to develop a comprehensive understanding of a particular teacher's instructional practices (Creswell & Plano Clark, 2011), a query remains about whether additional observations would have generated further or alternative understandings. Three observations is equivalent or similar to what some researchers have reported in their qualitative studies (Parr & Limbrick, 2010), but is significantly fewer than what others have reported (Langer, 2001; Pressley et al., 1998).

A connected limitation relates to the number of cases in the study. Nine purposefully selected teacher participants is probably sufficient for generating in-depth information about teacher practices in a (mainly) qualitative inquiry and making some generalisations from that information, but another query remains as to whether a greater number of teacher

participants would have generated different results (Creswell & Plano Clark, 2011; Miles & Huberman, 1994).

The number of learner participants (210) in the study is also probably sufficient to generate some meaningful quantitative data on learner achievement gains (Creswell, 2008). However, the number of some groups of learners within the total number is low, especially at the individual class level. For example, six classes contained three or fewer Māori learners and five classes contained no Pasifika learners. Most Māori learners (67.7%) were in three classes, and most Pasifika learners (83.3%) were in two classes. As reported above, these disproportionate distributions restricted the researcher's capacity to make valid or generalisable conclusions about teacher-learner links in relation to learner ethnicity.

Another limitation (as discussed in **Sections 3.5.2 and 3.5.3**) relates to my relationship as researcher with teacher participants (Creswell, 2008; Miles & Huberman, 1994; Tashakkori & Teddlie, 1998). All knew me at the start of the study as a professional development provider with a national profile. Some (n = 5) had worked directly with me. Although I worked actively (by being personally and professional unobtrusive) at reducing the possible impact of my presence in classrooms, a query remains as to whether my presence influenced what teachers "said" during interviews or "did" during observations. However, because analysis of their actions largely matches illustrations of effective literacy practice outlined by literacy researchers in other studies of writing instruction (referred to in **Chapter 2**), it seems that they were not "acting" unusually. Another query remains as to whether my close prior knowledge of some participants influenced my inferential analysis of observed lesson transcripts. This possible limitation was addressed by requiring an external reviewer to undertake an inferential consistency audit of my judgments (as outlined in **Section 3.7.2**).

A final limitation links directly to the study's methodology. As a study using quantitative and qualitative research methods (especially the use of observation and interview for data gathering) with a small number of purposefully selected participants, the design did not permit direct causality between particular aspects of teacher pedagogy and learner outcomes to be established (Devore & Peck, 2005; Erceg-Hurn & Mirosevich, 2008). However, non-parametric measures of correlation have been applied to the data signifying some significant levels of correlation and some important signals of association between particular teacher inputs and learner outputs. These are signalled by the emergence of foreground dimensions of effective practice and instructional strategies, albeit within a pedagogical context

demanding proficient operation of all dimensions and strategies. As a study that explores association between variables, it proffers some likelihoods or probabilities as to why some Year 5 to 8 New Zealand learners are attaining higher than expected rates of progress in writing than others are achieving.

8.3. Recommendations for future research

A study such as this cannot stand alone. It has presented a range of findings on links between teacher pedagogy and positive learner outcomes within the context of instructional writing but additional research needs to be undertaken if a complete picture of an effective teacher of writing is to emerge.

The focus of this study has been on *what teachers do*, as a number of researchers (Alton-Lee, 2003; Darling-Hammond, 1999; Hattie, 2003) have concluded that teachers' effective use of pedagogical strategies has the greatest effect on learner gains. But, as discussed in **Chapter 1**, teacher quality is also contingent on the *literacy content knowledge* that teachers hold (Ball et al., 2008; Medwell et al., 1998; Shulman, 1987), their *knowledge of effective pedagogy* (Berliner, 2001, 2004; Bond et al., 2000; Grossman et al., 2010; Medwell et al., 1998), their *beliefs about literacy teaching and learning* (Berry, 2006; Medwell et al., 1998; Poulson et al., 2001) and their *personal disposition and aptitudes for literacy teaching and learning* (Berliner, 2004; Bransford et al., 2004; Schwartz et al., 2008).

Investigations of these aspects of teacher effectiveness (particularly their impact on learner gains) should be undertaken to generate the complete picture. This would necessitate refining and extending processes for collecting and analysing data (for example, using survey and questionnaire methods) so that reasonably valid conclusions could be made about aspects of effective practice that are less discrete than teacher actions and hence more difficult to measure; namely, teacher knowledge, beliefs and aptitudes.

It would also be worthwhile investigating further the reliability and validity of several aspects of this study. One suggestion is to apply its research goals and methodology to a random sample of teacher participants so as to compare findings from exceptional teachers (such as those in this study) with findings from "all" teachers about selected aspects.

Another suggestion is to investigate further any findings that are somewhat inconclusive in this study, such as the actual impact of purposefulness and ownership by learners (in relation to learning tasks and goals) on learner gains over time. It would also be useful to

investigate further the impact of proficient use of self-regulation strategies by learners on positive outcomes for learners. This could be undertaken by applying research designs such as nested design (Shavelson & Webb, 2006) or negative case analysis (Tashakkori & Teddlie, 1998) to selected cases. In whatever investigations were planned and undertaken, it would be necessary to ensure participation of research cases (such as ethnic minority learners) that were unable to be fully explored in this study.

Proficiency in written language is not only desirable amongst Year 5 to 8 learners but, indeed, is expected of them. Proficiency is necessary if learners are to achieve ongoing success in their learning, whatever the context or mode of instruction. The aim of this study has been to add to and nuance the emerging literature on effective literacy practice by developing and describing a set of coherent, connected and contextualised dimensions of effective practice and instructional strategies that teachers of Year 5 to 8 learners can employ strategically to help them achieve success, particularly but not exclusively within the New Zealand context. This includes some nominated foreground dimensions and strategies. It is anticipated that this will assist teachers to understand the maximum likelihoods of what needs to be in place for higher than anticipated learner gains and outcomes in writing.

Appendices

Appendix A: Research studies considered for inclusion in literature review

Allington, R.L. (2005). What counts as evidence in evidence-based education. *Reading Today, 23*(3), 16.

Allington, R. L., & Johnston, P. H. (2000). *What do we know about effective fourth-grade teachers and their classrooms?* (Report Series 13010). Retrieved from University of Albany website: http://www.albany.edu/cela/reports/allington/allington4thgrade13010.pdf

Allington, R.L., Johnston, P.H., & Day, J.P. (2002). Exemplary fourth grade teachers. *Language Arts, 79*(6), 462-466.

Alvermann, D. (2002). Effective literacy instruction for adolescents. *Journal of Literacy Research, 34*(2), 1-14.

Andrade, H., Buff, C., Terry, J., Erano, M. & Paolino, S. (2009). Assessment-driven improvements in middle school students' writing. *Middle School Journal, 40*(4), 4-12.

Andrade, H., Du, Y. & Mycek, K. (2010). Rubric-referenced self-assessment and middle school students' writing. *Assessment in Education: Principles, Policy and Practice, 17*(2), 199-214.

Applebee, A.N. & Langer, J.A. (2006). *The state of writing instruction in America's schools: What existing data tells us*. A report for the National Research Center on English Learning and Achievement (University of Albany, New York).

Applebee, A.N. & Langer, J.A (2009). What is happening in the teaching of writing? *English Journal, 98*(5), 18-29.

Applebee, A.N. & Langer, J.A (2011). A snapshot of writing instruction in middle schools and high schools. *English Journal, 100*(6), 14-27.

Bangert-Drowns, R.L., Hurley, M. & Wilkinson, B. (2004). The effects of school-based writing-to-learn interventions on academic achievement: A meta-analysis. *Review of Educational Research, 74*(1), 29-58.

Beard, R. (2002). The effective teaching of writing. *SET: Research Information for Teachers, 1*, 44-48.

Beck, S. (2006). Subjectivity and intersubjectivity in the teaching and learning of writing. *Research in the Teaching of English, 40*(4), 413-459.

Block, C.C. (2001). The case for exemplary instruction: Especially for students who begin school without the precursors for literacy success. *National Reading Conference Yearbook, 49*, 421-440.

Block, C. C., Oakar, M., & Hurt, N. (2002). The expertise of literacy teachers: A continuum from preschool to Grade 5. *Reading Research Quarterly, 37*(2), 178–206. doi:10.1598/RRQ.37.2.4

Block, C.C. & Mangieri, J. (2003). *Exemplary literacy teachers: promoting success for all children in grades K-5*. New York: The Guildford Press.

Bridge, C.A., Compton-Hall, M. & Cantrell, S.C. (1997). Classroom writing practices revisited: The effects of statewide reform on writing instruction. *The Elementary School Journal, 98*(2), 151-170.

Bromley, K. (2007). Best practices in teaching writing. In L. Gambrell, L.M. Morrow & M. Pressley (Eds.). *Best Practices in Literacy Instruction* (pp.243-263). New York: The Guildford Press.

Brooker, B., Ellis, G., Parkhill, F. & Bates, J. (2010). Maori achievement in literacy and numeracy in a sample of Canterbury schools. *New Zealand Journal of Educational Studies, 45*(1), 49-65.

Cutler, L. & Graham, S. (2008). Primary grade writing instruction: A national survey. *Journal of Educational Psychology, 100*(4), 907-919.

Davis, A. (2004). Raising achievement in writing: The integration of formative assessment principles in the writing lesson. *Reading Forum NZ, 19*(3), 23-32.

De La Paz, S., & Graham, S. (2002). Explicitly teaching strategies, skills and knowledge: Writing instruction in middle school classrooms. *Journal of Educational Psychology, 94*(4), 687–698. doi:10.1037/0022-0663.94.4.687

Dixon, H. & Williams, R. (2002). Teachers' understanding and use of formative assessment in literacy learning. *New Zealand Annual Review of Education, 12*, 95-110.

Douglas, S. & Thompson, L. (2007). Not just 'more of the same': What's different about literacy teaching in years 5 to 8? *Reading Forum NZ, 22*(1), 20-24.

Dyson, A.H. & Freedman, S.W. (2003). Writing. In J. Flood, D. Lapp, J. Squire & J. Jensen (Eds.) *Handbook of research on teaching the English language arts* (2nd ed.) (pp.967-992). Hillsdale, NJ: Lawrence Erlbaum Associates Inc.

Englert, C. S., Raphael, T. E., Anderson, L. M., Anthony, H. M., & Stevens, D. D. (1991). Making strategies and self-talk visible: Writing instruction in regular and special education classrooms. *American Educational Research Journal, 28*(2), 337–372. doi:10.3102/00028312028002337

Farnan, N. & Dahl, K (2003) Children's writing: Research and practice. In J. Flood, D. Lapp, J. Squire & J. Jensen (Eds.) *Handbook of research on teaching the English language arts* (2nd ed.) (pp.993-1007). Hillsdale, NJ: Lawrence Erlbaum Associates Inc.

Faulkner, V. (2005). Adolescent literacies within the middle years of schooling – a case study of a year 8 homeroom. *Journal of Adolescent and Adult Literacy, 49*(2), 108-117.

Fidalgo, R., Torrance, M., & Garcia, J. (2008). The long-term effects of strategy-focussed writing instruction for grade six students. *Contemporary Educational Psychology, 33*(4), 672–693. doi:10.1016/j.cedpsych.2007.09.001

Fisher, D. and & Frey, N. (2003). Writing instruction for struggling adolescent readers: A gradual release model. *Journal of Adolescent and Adult Literacy*, *46*(5), 396-405.

Flynn, N. (2007). What do effective teachers of literacy do? Subject knowledge and pedagogical choices for literacy. *Literacy*, *41*(3), 137–146. doi:10.1111/j.1467-9345.2007.00452.x

Furtak, E.M. & Ruiz-Primo, M.A. (2008). *Making students' thinking explicit in writing and discussion: An analysis of formative assessment prompts*. Retrieved 29 February 2008 from www.interscience.wiley.com

Gadd, M. (2006). Billy's story: What's essential in the teaching of reading and writing? *Reading Forum NZ*, *21*(2), 5-14.

Gadd, M. (2009). Working with reluctant or struggling writers. *Reading Forum NZ*, *24*(3), 5-14.

Galbraith, D., & Rijlaarsdam, G. (1999). Effective strategies for the teaching and learning of writing. *Learning and Instruction*, *9*(2), 93–108. doi:10.1016/S0959-4752(98)00039-5

Gambrell, L.B. & Chasen, S.B. (1991). Explicit story structure instruction and the narrative writing of fourth and fifth-grade below average readers. *Reading Research and Instruction 31*, 54-62.

Gambrel, L.B., Malloy, J.A. & Mazzoni, S.A. (2007). Evidence-based best practices for comprehensive literacy instruction. In L.B. Gambrell, L.M. Morrow & M. Pressley (Eds.), *Best practices in literacy instruction* (3rd ed.) (pp.11-29) New York: Guilford.

Gilbert, J., & Graham, S. (2010). Teaching writing to elementary students in grades 4–6: A national survey. *The Elementary School Journal*, *110*(4), 1–15. doi:10.1086/651193

Graham, S., McArthur, C. & Schwartz, S. (1995). Effects of goal setting and procedural facilitation on the revising behaviour and writing performance of students with writing and learning problems. *Journal of Educational Psychology*, *87*(2), 230-240.

Graham, S., Harris, K., Fink-Chorzempa, B. & MacArthur, C. (2003). Primary grade teachers' instructional adaptations for struggling writers: A national survey. *Journal of Educational Psychology*, *95*(2), 279-292.

Graham, S. (2006). Strategy instruction and the teaching of writing: A meta-analysis. In C. MacArthur, S. Graham & J. Fitzgerald (Eds.) *Handbook of writing research* (pp.187-207). New York: The Guildford Press.

Graham, S. & Perin, D. (2007a). What we know, what we still need to know: Teaching adolescents to write. *Scientific Studies of Reading*, *11*(4), 313-335.

Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, *99*(3), 445–476. doi:10.1037/0022-0663.99.3.445

Graham, S. & Perin, D. (2007c). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools*. A report commissioned for the Carnegie Corporation of New York.

Hall, K. (2002). Developing the protocol for a systematic review of literature on effective literacy teachers and their teaching: Research in progress. *Reading: Literacy and Language, 36*(1), 44–47. doi:10.1111/1467-9345.00184

Hall, K. & Harding, A. (2003). *A systematic review of effective literacy teaching in the 4 to 14 age range of mainstream schooling* (Tech. Rep.). Research Evidence in Education Library London Social Science Research Unit, Institute of Education.

Hansen, J. & Kissel, B. (2009). Writing instruction for adolescent learners. In K.D. Wood & W.E. Blanton (Eds.), *Literacy instruction for adolescents* (pp.392-419). New York: The Guilford Press.

Hansen, S. (2002). Writing in the English classroom: What do girls and boys believe? *English in Aotearoa, 46*, 35-38, 51-59.

Harris, K.R., Graham, S., Mason, L.H. & Saddler, B. (2002). Developing self-regulated writers. *Theory Into Practice*, 41(2), 110-115.

Hawthorne, S. (2007). How best to teach writing skills: A review of the research into effective ways of teaching writing. *English In Aotearoa, 62*, 27-35.

Hillocks, G. (2006). Middle and high school composition. In P. Smagorinsky (Ed.) *Research on composition: Multiple perspectives on two decades of change* (pp.48-77). New York: Teachers' College Press.

Hood, H. (2006). Riding the literacy roundabout: Where to now with the teaching of writing? *Reading Forum NZ, 21*(1), 5-14.

Juzwik, M., Curcic, S., Wolbers, K., Moxley, K., Dimling, L. & Shankland, R. (2006). Writing into the 21st century: An overview of research on writing, 1999-2004. *Written Communication, 23*(4), 451-476.

Kiuhara, S. A., Graham, S., & Hawken, L. S. (2009). Teaching writing to high school students: A national survey. *Journal of Educational Psychology, 101*(1), 136–160. doi:10.1037/a0013097

Knudson, R. E. (1990). A question for writing teachers: How much help is too much? *English Journal, 79*(6), 91–93. doi:10.2307/819056

Kong, A. & Pearson, D. (2003). The road to participation: The construction of a literacy practice in a learning community of linguistically diverse learners. *Research in the Teaching of English, 38*(1), 85-124.

Langer, J.A. (2000). Excellence in English in middle and high school: How teachers' professional lives support student achievement. *American Educational Research Journal, 37*(2), 397-439.

Langer, J. A. (2001). Beating the odds: Teaching middle and high school students to read and write well. *American Educational Research Journal, 38*(4), 837–880. doi:10.3102/00028312038004837

Langer, J.A. & Close, E. (2001). *Improving literacy understanding through classroom conversation*. A report for the National Research Center on English Learning and Achievement (University of Albany, New York).

Langer, J.A. & Appleby, A.N. (2005). *Supporting cognitive engagement in adolescent literacy learning.* A report for the National Research Center on English Learning and Achievement (University of Albany, New York).

Larsen, J. & Maier, M. (2000). Co-authoring classroom texts: Shifting participant roles in writing activity. *Research in the Teaching of English, 34*(4), 468-497.

Limbrick, L. (2008). Improving students' writing: The impact of teacher knowledge and student-focused practice. *SET: Research Information for Teachers, 2*, 34-38.

Limbrick, L. (2008a). Using evidence to raise student writing achievement: Thinking about what we are doing and doing it better. *Reading Forum NZ, 23*(3), 5-12.

Lipson, M.Y., Mosenthal, J. & Daniels, P. (2000). Process writing in the classrooms of eleven fifth-grade teachers with different orientations to teaching and learning. *The Elementary School Journal, 101*(2), 209-231.

Magnifico, A.M. (2010). Writing for whom? Cognition, motivation and a writer's audience. *Educational Psychologist, 45*(3), 167-184.

McCurdy, M., Skinner, C., Watson, S. & Shriver, M. (2008). Examining the effects of a comprehensive writing program on the writing performance of middle school students with learning disabilities in written expression. *School Psychology Quarterly, 23*(4), 571-586.

Medwell, J., Wray, D., Poulson, L. & Fox, R. (1998). *Effective teachers of literacy*. A report commissioned by the UK Teacher Training Agency.

Muijs, D. & Reynolds, D. (2001). *Effective teaching: evidence and practice*. London: Paul Chapman Publishing.

Nystrand, M., Gamoran, A. & Carbonaro, W. (1998*). Towards an ecology of learning: The case of classroom discourse and its effects on writing in high school English and social studies*. A report for the National Research Center on English Learning and Achievement (University of Albany, New York).

Nystrand, M., L. Wu, A. Gamoran, S. Zeiser and Long, D. (2001). *Questions in time: Investigating the structure and dynamics of unfolding classroom discourse*. A report for the National Research Center on English Learning and Achievement (University of Albany, New York).

Ostrowski, S. (2000). *How English is taught and learned in four exemplary middle and high school classrooms.* A report for the National Research Center on English Learning and Achievement (University of Albany, New York).

Page-Voth, V. & Graham, S. (1999). Effects of goal setting and strategy use on the writing performance and self-efficacy of students with writing and learning problems. *Journal of Educational Psychology, 91*(2), 230-240.

Parr, J.M., Jesson, R. & McNaughton, S. (2009). Agency and platform: The relationships between talk and writing. In R. Beard, D. Myhill, J. Riley & M. Nystrand (Eds.) *The Sage handbook of writing development* (pp.246-259). Thousand Oaks, CA: SAGE Publications Ltd.

Parr, J. M., & Limbrick, L. (2010). Contextualising practice: Hallmarks of effective teachers of writing. *Teaching and Teacher Education, 26*(3), 583–590. doi:10.1016/j.tate.2009.09.004

Parris, S. R., & Block, C. C. (2007). The expertise of adolescent literacy teachers. *Journal of Adolescent & Adult Literacy, 50*(7), 582–596. doi:10.1598/JAAL.50.7.7

Patthey-Chavez, G.G., Matsumura, L.C. & Valdes, R. (2004). Investigating the process approach to writing instruction in urban middle schools. *Journal of Adolescent and Adult Literacy, 47*(6), 462-477.

Perin, D. (2007). Best practices in teaching writing to adolescents. In S. Graham, C. MacArthur & J. Fitzgerald (Eds.) *Best practices in writing instruction* (pp.242-264). New York: The Guildford Press.

Petersen, S.S., McLay, J. & Main, K. (2010). Teaching writing in Canadian middle-grades classrooms: A national study. *Middle Grades Research Journal, 5*(2), 77-90.

Poulson, L., Avramides, E., Fox, R., Medwell, J., & Wray, D. (2001). The theoretical beliefs of effective teachers of literacy in primary schools: An exploratory study of orientations to reading and writing. *Research Papers in Education, 16*(3), 271–292. doi:10.1080/02671520126827

Poulson, L. & Avramidis, E. (2003). Pathways and possibilities in professional development: Case studies of effective teachers of literacy. *British Educational Research Journal, 29*(4), 543-560.

Pressley, M., Rankin, J. & Yokoi, L. (1995). *A survey of instructional practices of primary teachers nominated as effective in promoting literacy*. National Reading Research Centre: Reading Research Report 41.

Pressley, M., Wharton-McDonald, R., Mistretta-Hampson, J. & Yokoi, L. (1997). *A survey of the instructional practices of grade 5 teachers nominated as effective in promoting literacy*. National Reading Research Centre: Reading Research Report 85.

Pressley, M., Raphael, L., Gallagher, J. D., & DiBella, J. (2004). Providence-St. Mel School: How a school that works for African-American students works. *Journal of Educational Psychology, 96*(2), 216–235. doi:10.1037/0022-0663.96.2.216

Pressley, M., Wharton-McDonald, R., Mistretta-Hampson, J., & Echevarria, M. (1998). Literacy instruction in 10 fourth and fifth grade classrooms in upstate New York. *Scientific Studies of Reading, 2*(2), 159–194. doi:10.1207/s1532799xssr0202_4

Pressley, M, Gaskins, I.W., Solic, K. & Collins, S. (2006). A portrait of Benchmark School: How a school produces high achievement in students who previously failed. *Journal of Educational Psychology, 98*(2), 282-306.

Pressley, M, L. Mohan, L. Fingeret, K. Reffitt and L. Raphael-Bogaert (2007). Writing instruction in engaging and effective elementary settings. In S. Graham, C. MacArthur & J. Fitzgerald (Eds.). *Best practices in writing instruction* (pp.13-27). New York: The Guildford Press.

Pressley, M., Mohan, L., Raphael, L. & Fingeret, L. (2007). How does Bennett Woods Elementary School produce such high reading and writing achievement? *Journal of Educational Psychology, 99*(2), 221-240.

Purcell-Gates, V., Duke, N. K., & Martineau, J. A. (2007). Learning to read and write genre specific-text: Roles of authentic experience and explicit teaching. *Reading Research Quarterly, 42*(1), 8–45. doi:10.1598/RRQ.42.1.1

Rankin-Erickson, J. L., & Pressley, M. (2000). A survey of instructional practices of special education teachers nominated as effective teachers of writing. *Learning Disabilities Research and Practice, 15*(4), 206–225. doi:10.1207/SLDRP1504_5

Raphael, L. M, Pressley, M., & Mohan, L. (2008). Engaging instruction in middle school classrooms: An observational study of nine teachers. *The Elementary School Journal, 109*(1), 61–81. doi:10.1086/592367

Sadoski, M., Willson, V.L. & Norton, D.E (1997). The relative contributions of research-based composition activities to writing improvement in the lower and middle grades. *Research in the Teaching of English, 31*(1), 120-150.

Sawyer, R., Graham, S. & Harris, K.R. (1992). Direct teaching, strategy instruction, and strategy instruction with explicit self-regulation: Effects on the composition skills and self-efficacy of students with learning disabilities. *Journal of Educational Psychology, 84*(3), 340-352.

Schunk, D. H. (2003). Self-efficacy for reading and writing: Influence of modelling, goal setting and self-evaluation. *Reading and Writing Quarterly, 19*(2), 159–172. doi:10.1080/10573560308219

Schunk, D. H., & Zimmerman, B. J. (2007). Influencing children's self-efficacy and self-regulation of reading and writing through modelling. *Reading and Writing Quarterly, 23*(1), 7–25. doi:10.1080/10573560600837578

Stolarek, E.A. (1994). Prose modeling and metacognition: The effect of modeling on developing a metacognitive stance toward writing. *Research in the Teaching of English, 28*(2), 154-174.

Taylor, B.M., Pressley, M. & Pearson, D. (2000). *Effective teachers and schools: Trends across recent studies*. CIERA Report. Ann Arbor, MI: Center for the Improvement of Early Reading Achievement, University of Michigan.

Thompson, L. (2003). On being effective. *Reading Forum NZ, 18*(1) 13-20.

Tienken, C.H. & Achilles, C.M. (2009). Relationship between class size and students' opportunity to learn writing in middle school. *Research in the Schools, 16*(1), 13-24.

Topping, K., & Ferguson, N. (2005). Effective literacy teaching behaviours. *Journal of Research in Reading, 28*(2), 125–143. doi:10.1111/j.1467-9817.2005.00258.x

Torrance, M., Fidalgo, R. & Garcia, J.N. (2007). The teachability and effectiveness of cognitive self-regulation in sixth-grade writers. *Learning and Instruction, 17*(3), 265-285.

Troia, G. & Graham, S. (2002). The effectiveness of a highly explicit teacher-directed strategy instruction routine: Changing the writing performance of students with learning disabilities. *Journal of Learning Disabilities,* 35(4), 290-305.

Troia, G.A. & Maddox, M. (2004). Writing instruction in middle schools: Special and general education teachers share their views and voice their concerns. *Exceptionality, 12*(1), 19-37.

Troia, G.A. (2007). Research in writing instruction: What we know and what we need to know. In M. Pressley, A. Billman, K. Perry, K. Reffitt & J.Moorhead Reynolds (Eds.) *Shaping literacy achievement: Research we have, research we need* (pp.129-156). New York: The Guildford Press.

Van Kraayenoord, C.E., Miller, R., Moni, K. & Jobling, A. (2009). Teaching writing to students with learning difficulties in inclusive English classrooms: Lessons from an exemplary teacher. *English Teaching: Practice and Critique, 8*(1), 23-51.

Walser, T.M. & Slocum, T. (2000). *Self-managed composing instruction: Teaching for transfer of writing knowledge and skills.* A paper presented to the American Educational Research Association, New Orleans.

Wharton-McDonald, R., Pressley, M., & Hampston, J. (1998). Literacy instruction in nine first-grade classrooms: Teacher characteristics and student achievement. *Elementary School Journal, 99*(2), 101–128. doi:10.1086/461918

Wiebe Berry, R.A. (2006). Beyond strategies: Teacher beliefs and writing instruction in two primary inclusion classrooms. *Journal of Learning Disabilities, 39*(1), 11-24.

Wray, D. & Medwell, J. (2001). *What can teachers of literacy learn from a study of effective teachers*? A paper presented at the 12th European Reading Conference (Dublin, Ireland).

Wray, D., Medwell, J., Fox, R. & Poulson, L. (2000). The teaching practices of effective teachers of literacy. *Educational Review, 52*(1), 75-84.

Appendix B: Content analysis matrix

Expectations

The teacher:

- Holds and articulates a clear vision of what most students can reasonably be expected to achieve over time.
- Holds and articulates a clear vision of the particular needs of particular students.
- Links their vision of achievement to cross-curricular writing demands.
- Communicates high expectations for student attainment during the lesson.
- Communicates expectations clearly through presentation of the writing classroom.

Learning Goals

The teacher:

- Sets a clear learning goal for the lesson that is generally process-oriented.
- Ensures that the learning goal links directly to the students' identified learning strengths and needs.
- Involves students in the development and/or refinement of the learning goal and success criteria.
- Differentiates the learning goal and success criteria in relation to students' strengths and needs.
- Ensures that students understand the meaning and intent of the learning goal and how to achieve it.

Learning Tasks

The teacher:

- Devises learning tasks that match students' identified learning needs.

- Devises open-ended learning tasks that can be undertaken over an extended time-period.
- Devises learning tasks that students can identify as purposeful. This includes students understanding how the learning task contributes to their ongoing development as writers.
- Involves students in the construction of the learning task.
- Takes account of diverse student backgrounds when devising learning tasks.

Direct Instruction

The teacher:

- Explains and/or demonstrates clearly what students are expected to do, learn and achieve in the lesson.
- Makes clear links and builds on what the students know or have practised already.
- Uses ‘teachable moments’ during the lesson to provide instruction that is clearly linked to the learning goal.
- Uses the language of writing when interacting with their students.
- Questions students in a way that requires them to think further about or explore the learning goal.
- Prompts students toward learning points that appear to be within their immediate grasp and are related to the learning goal.
- Checks that students know and understand what they have learnt and achieved from the lesson.

Responding to Students

The teacher:

- Uses a range of ways to affirm and/or respond to students’ efforts and comments.

- Is direct and specific to students when commenting on their progress and achievement.
- Focuses on process rather than product when commenting on their progress and achievement.
- Indicates ‘next steps’ to students when commenting on their progress and achievement.
- Checks that students understand the learning concepts inherent in any feedback/feed-forward they receive and how they are going to address them.
- Shows respect to students’ efforts and work through their comments and actions.

Student Engagement and Challenge

The teacher:

- Presents and explores the learning task with students in a way that challenges their cognitive processes.
- Presents and explores the learning task with students in a way that elicits widespread participation that is learning-focused.
- Ensures that students are continually and directly engaged in cognitive aspects of the learning goal and/or task throughout the lesson.
- Promotes the concept of ‘being strategic’ as a cognitive asset.
- Promotes the concept of ‘risk taking’ as a cognitive asset.
- Attends to differentiated learning needs through individualised or small group instruction and interactions.
- Differentiates their use of instructional approaches and strategies according to students’ strengths and needs.
- Ensures that text generated or skills practised through the lesson are at a level appropriate to students’ expected outputs.

- Checks that students understand how their current learning links to their anticipated learning.

Organisation and Management

The teacher:

- Breaks the lesson into easily identifiable stages.
- Sets manageable time allocations during the lesson. This should lead to students achieving an output that matches teacher's articulated expectations.
- Makes instructional contact on an equitable basis with all students during the lesson.
- Provides sufficient opportunities for students to develop and practise their writing skills within the lesson.
- Maintains records of students' individual progress and achievement as developing writers.
- Ensures that the lesson operates to transparent and clearly understood routines, directions and behavioural expectations.

Self-regulation

The teacher:

- Ensures that students receive regular opportunities to write independently or in collaboration with other students outside the prescribed instructional writing period.
- Ensures that students receive regular opportunities to write on self-selected topics.
- Requires students to set personal learning goals and criteria for success according to their perceived strengths and needs.
- Requires students to self-monitor their progress and achievement in relation to personal learning goals and criteria for success.
- Discusses students' writing with them in relation to students' personal learning goals and criteria for success.

- Encourages students to assume responsibility for seeking, gaining and using support to address identified writing challenges.

- Provides sufficient opportunities for students to work collaboratively and talk about their writing with other students during the lesson – what they are doing, thinking about, learning and/or achieving.

- Provides sufficient opportunities for students to reflect on and articulate what they are doing, thinking about, learning and achieving during the lesson and how they can apply this understanding to subsequent writing tasks.

- Encourages students to use a range of classroom resources (including electronic resources) independently and strategically to plan, craft, re-craft and present texts.

Appendix C: Continuous descriptors used for quantification of instructional strategies

Learning Tasks	
The teacher devises tasks that match students' identified learning needs.	3 = Main class or group task chosen requires students to learn or practise writing skills that match identified needs directly. Teacher uses similar language when describing the needs, setting the learning goal, demonstrating what is to be done/learnt/achieved and giving feedback. 2 = Main class or group task chosen requires students to learn or practise writing skills that match identified needs reasonably directly. Teacher uses some similar language when describing the need, setting the learning goal, demonstrating what is to be done/learnt/achieved and giving feedback. 1 = Main class or group task chosen requires students to learn or practise writing skills that match identified needs somewhat directly. Teacher might use some similar language when describing the need, setting the learning goal, demonstrating what is to be done/learnt/achieved and giving feedback.
The teacher devises open-ended tasks.	3 = Main class or group task gives wide scope for students to develop writing that requires them to make significant personalised decisions about content. Although the teacher may have devised the task, content largely results from student decision-making. 2 = Main class or group task gives some scope for students to develop writing that requires them to make significant personalised decisions about content. Although the teacher may have devised the task, content is a blend of student and teacher decision-making. 3 = Main class or group task gives reasonably limited scope for students to develop writing that requires them to make significant personalised decisions about content. Content results more from teacher decision-making than student decision-making.
The teacher selects tasks that students can identify as purposeful.	3 = Main class or group task chosen has a purposeful outcome that students can relate to and identify readily. This might mean, for example, that the task almost always links to students' own or cross-curricular experiences, interests or discoveries. 2 = Main class or group task chosen has a reasonably purposeful outcome that students can relate to and identify reasonably easily. This might mean, for example, that the task usually links to students' own or cross-curricular experiences, interests or discoveries. 1 = Main class or group task chosen has a somewhat purposeful outcome that students can relate to and identify somewhat easily. This might mean, for example, that the task sometimes links to students' own or cross-curricular experiences, interests or discoveries.
The teacher involves students in the construction of the task.	3 = Teacher almost always requests ideas from students re. what they could do/write about to meet learning goal and recognizes their ideas when devising writing topics/tasks. 2 = Teacher often requests ideas from students re. what they could do/write about to meet learning goal and recognizes their ideas when devising writing topics/tasks. 1 = Teacher sometimes requests ideas from students re. what they could do/ write about to meet learning goal and recognizes their ideas when devising writing topics/tasks.
The teacher takes account of diverse student backgrounds when devising learning tasks.	3 = Teacher articulates clearly how the writing task links to students' lives/backgrounds/interests. They can give clear evidence of how they have planned for selection of writing tasks over time to link to students' lives/ backgrounds/interests. Almost all students appear to be engaged/interested in the content of the main class or group task. 2 = Teacher articulates reasonably clearly how the writing task links to students' lives/ backgrounds/ interests. They can give reasonable evidence of how they have planned for selection of writing tasks over time to link to students' lives/backgrounds/interests. Most students appear to be engaged/interested in the content of the main class or group task. 1 = Teacher articulates somewhat clearly how the writing task links to students' lives/backgrounds/ interests. Teacher can give some evidence of how they have planned for selection of writing tasks over time to link to students' lives/ backgrounds/interests. Some students appear to be engaged/interested in the content of the main class or group task.

Learning Goals	
The teacher sets a clear learning goal for the lesson.	3 = Teacher articulates what understandings, knowledge, strategies and/or skills students are expected to practise and/or achieve during the lesson, the details of the task they are expected to undertake and what they are expected to do if they are to be successful in a way that is very clear to the students (and the researcher). Learning goal is clearly documented and shared accessibly with students. 2 = Teacher articulates what understandings, knowledge, strategies and/or skills students are expected to practise and/or achieve during the lesson, the details of the task they are expected to undertake and what they are expected to do if they are to be successful in a way that is reasonably clear to the students (and the researcher). This may require a small amount of student (and researcher) inference. Learning goal is probably documented and shared accessibly with students. 1 = Teacher articulates what understandings, knowledge, strategies and/or skills students are expected to practise and/or achieve during the lesson, the details of the task they are expected to undertake and what they are expected to do if they are to be successful in a way that requires some inference by the students (and the researcher). Learning goal may be documented and shared accessibly with students.
The teacher ensures that the learning goal links directly to the students' identified learning strengths and needs.	3 = Teacher articulates clear links between the learning goal and specific student learning needs, especially during pre-observation interviews. 2 = Teacher articulates reasonably clear links between the learning goal and specific student learning needs, especially during pre-observation interviews. This may require a small amount of inference by the researcher. 1 = Teacher articulates somewhat clear links between the learning goal and specific student learning needs, especially during pre-observation interviews. This may require some (or even considerable) inference by the researcher.
The teacher involves students in the development and/or refinement of the learning goal and success criteria.	3 = Documented or articulated learning goal and success criteria incorporate a predominant amount of student thinking and contributions (generated through teacher questioning, prompting and probing at a deep level). 2 = Documented or articulated learning goal and success criteria incorporate some evidence of student thinking and contributions (generated through teacher questioning, prompting and probing at a reasonably deep level). 1 = Documented or articulated learning goal and success criteria incorporate a limited amount of student thinking and contributions (generated through teacher questioning, prompting and probing at a somewhat deep level).
The teacher differentiates the learning goal and success criteria in relation to students' strengths and needs.	3 = The notion of differentiation appears to be important to the teacher. They make clear mention of differentiated learning goals, criteria for success and/or learning tasks for groups developed from identified strengths and needs and they can articulate points of differentiation clearly in interviews. They can also articulate clearly how and why these goals, criteria and tasks have been developed for each group. 2 = The notion of differentiation appears to be reasonably important to the teacher. They make reasonably clear mention of differentiated learning goals, criteria for success and/or learning tasks for groups developed from identified strengths and needs and they can articulate points of differentiation reasonably clearly in interviews. They can also articulate reasonably clearly how and why these goals, criteria and tasks have been developed for each group, though this may require a small amount of inference. 1 = The notion of differentiation appears to be somewhat important to the teacher. They may make some mention of differentiated learning goals, criteria for success and/or learning tasks developed from identified strengths and needs in interviews. Any discussion of how and why these goals, criteria and tasks have been developed requires some (or even considerable) inference.

Learning Goals	
The teacher ensures that students understand the meaning and intent of the learning goal and how to achieve it.	3 = Teacher checks clearly and strategically (through questioning, prompting and explaining) that students understand what they are to achieve from a lesson and why they are to achieve it. They especially do this during direct instruction. Almost all students appear to understand what they are trying to achieve as they work independently. 'Touchstone students' can articulate this clearly in interviews. 2 = Teacher checks reasonably clearly and strategically (through questioning, prompting and explaining) that students understand what they are to achieve from a lesson and why they are to achieve it. They probably do this during direct instruction. Most students appear to understand what they are trying to achieve as they work independently. Some 'touchstone students' can articulate this clearly in interviews. 1 = Teacher checks somewhat clearly and strategically (through questioning, prompting and explaining) that students understand what they are to achieve from a lesson and why they are to achieve it. They probably do this during direct instruction. Some students appear to understand what they are trying to achieve as they work independently. Some 'touchstone students' can articulate this clearly in interviews.
Direct Instruction	
The teacher explains and/or demonstrates clearly what students are expected to do, learn and achieve in the lesson.	3 = Teacher uses one or more approaches to the teaching of writing to explain and/or demonstrate what students are expected to do, learn and/or achieve in the lesson in a way that makes the process and/or expected outcome clear to the students. Such approaches might include shared analysis of writing models, collaborative teacher-student writing and/or teacher demonstration with the use of 'think alouds'. Students appear to be confident about what they are expected to do, learn and achieve as they move from instruction to application and settle quickly to the task. 2 = Teacher uses one or more approaches to the teaching of writing to explain and/or demonstrate what students are expected to do, learn and achieve in the lesson in a way that makes the process and/or expected outcome reasonably clear to the students. Such approaches might include shared analysis of writing models, collaborative teacher-student writing and/or teacher demonstration with the use of 'think alouds'. Students appear to be reasonably confident about what they are expected to do, learn and achieve as they move from instruction to application and settle reasonably quickly to the task. 1 = Teacher uses one or more approaches to the teaching of writing to explain and/or demonstrate what students are expected to do, learn and achieve in the lesson in a way that is somewhat clear to the students. Such approaches might include shared analysis of writing models, collaborative teacher-student writing and/or teacher demonstration with the use of 'think alouds'. Students appear to be somewhat confident about what they are expected to do, learn and achieve as they move from instruction to application and settle somewhat quickly to the task.
The teacher makes clear links and builds on what the students know or have practised already.	3 = Teacher makes a range of direct references to students' previous tasks/ learning/achievement during the lesson and talks directly about how current tasks link to previous tasks/learning/achievement. 2 = Teacher makes some direct references to students' previous tasks/ learning/achievement during the lesson and talks reasonably directly about how current tasks link to previous tasks/learning/ achievement. 1 = Teacher may make implicit reference only to students' previous tasks/ learning/achievement during the lesson. Any talk about how current tasks link to previous tasks/learning/ achievement may require some (or even considerable) inference.
The teacher uses 'teachable moments' during the lesson to provide instruction that is clearly linked to the learning goal.	3 = Teacher uses both planned and unplanned actions strategically and confidently to promote student learning about writing. Unplanned actions usually arise from student responses. Teacher can articulate clearly why they undertook unplanned actions in the lesson. 2 = Teacher uses both planned and unplanned actions reasonably strategically and confidently to promote student learning about writing. Unplanned actions usually arise from student responses. Teacher can articulate reasonably clearly why they undertook unplanned actions in the lesson. 1 = Teacher uses both planned and unplanned actions somewhat strategically and confidently to promote student learning about writing. Unplanned actions usually arise from student responses. Teacher can articulate somewhat clearly why they undertook unplanned actions in the lesson.
The teacher uses the language of writing when interacting with their students.	3 = Teacher uses the meta-language of writing with students confidently and appropriately so as to enhance students' understanding of writing/writing processes/the writing task. Writing terms always used in context. Teacher explains and/or checks students' understanding of writing terms as necessary. Student responses suggest good understanding of meta-language used. 2 = Teacher uses the meta-language of writing with students reasonably confidently and

Learning Goals	
	appropriately so as to enhance students' understanding of writing/writing processes/the writing task. Teacher usually explains and/or checks students' understanding of writing terms as necessary. Student responses suggest reasonably good understanding of meta-language used. 1 = Teacher uses the meta-language of writing with students only occasionally or often but with some/limited confidence. Teacher sometimes explains and/or checks students' understanding of the writing terms used. Student responses suggest some/limited understanding of meta-language used.
The teacher questions students in a way that requires them to think further about or explore the learning goal.	3 = Almost all (more than 90%) teacher questions require students to clarify, elaborate or justify their thinking about issues that can be linked directly or indirectly to the learning goal. Many of these questions are probes of students' initial responses. Most student responses indicate reasonable depth of thinking about the writing issue under question. 2 = Most (70-89%) teacher questions require students to clarify, elaborate or justify their thinking about issues that can be linked directly or indirectly to the learning goal. Most of these questions are probes of students' initial responses. Many student responses indicate some depth of thinking about the writing issue under question. 3 = Some (less than 70%) teacher questions require students to clarify, elaborate or justify their thinking about issues that can be linked directly or indirectly to the learning goal. Some of these questions are probes of students' initial responses. Some student responses indicate reasonable depth of thinking about the writing issue under question.
The teacher prompts students toward learning points that appear to be within their immediate grasp and are related to the learning goal.	3 = Teacher enables students throughout the lesson to think more clearly or successfully about particular learning points by making links to contributions they have already made during discussions. Teacher uses a wide range of verbal prompts for this, especially reminder, associative and initiating prompts. 2 = Teacher enables students reasonably often during the lesson to think more clearly or successfully about particular learning points by making links to contributions they have already made. Teacher uses a reasonable range of verbal prompts for this, especially reminder, associative and initiating prompts. 1 = Teacher enables students from time to time during the lesson to think more clearly or successfully about particular learning points by making links with contributions they have already made. Teacher might use a limited range of verbal prompts for this, especially reminder, associative and initiating prompts.
The teacher checks that students know and understand what they have learnt and achieved from the lesson.	3 = Teacher checks in depth what students believe they have achieved at the end of lessons. Students self-assess their progress with confidence. 2 = Teacher checks in reasonable depth what students believe they have achieved at the end of lessons. Students self-assess their progress with reasonable confidence. 3 = Teacher checks in some depth what students believe they have achieved at the end of lessons. Students self-assess their progress with some (or even limited) confidence.

Responding to Students	
The teacher uses a range of ways to affirm and/or respond to students' comments.	3 = Teacher uses a wide-spread range of ways to affirm and/or respond to students' comments during discussions or conversations. Such ways might include non-verbal responses, simple verbal affirmations, evaluative comments, summarizing comments, further probing of the comment. 2 = Teacher uses a reasonable range of ways to affirm and/or respond to students' comments during discussions or conversations. Such ways might include non-verbal responses, simple verbal affirmations, evaluative comments, summarizing comments, further probing of the comment. Teacher might use some ways more habitually than others. 1 = Teacher uses a limited range of ways to affirm and/or respond to students' comments during discussions or conversations. Such ways might include non-verbal responses, simple verbal affirmations, evaluative comments, summarizing comments, further probing of the comment. Teacher probably uses some ways more habitually than others.
The teacher is direct and specific to students when commenting on their progress and achievement.	3 = Teacher uses direct and accessible language when commenting to students about what they have achieved. Almost all comments are in relation to the learning goal and/or the success criteria. They are almost always specific to what students have achieved/have not achieved. Almost all students can articulate and justify clearly what the teacher believes about their progress. 2 = Teacher uses reasonably direct and accessible language when commenting to students on what they have achieved. Most comments are in relation to the learning goal and/or the success criteria. They are usually specific to what students have achieved/have not achieved. Many students can articulate and justify clearly what the teacher believes about their progress. 1 = Teacher uses somewhat direct and accessible language when commenting to students on what they have achieved. Some comments are in relation to the learning goal and/or the success criteria and are specific to what students have achieved/have not achieved. Some students can articulate and justify what the teacher believes about their progress.
The teacher focuses on process rather than product when commenting on progress/achievement.	3 = Teacher makes strong links with the writing processes (forming intentions, crafting, re-crafting, presenting) when discussing students' progress/achievement as developing writers with them. They focus more on the deeper features of writing (for example, content, audience awareness, structure, sentence formation, vocabulary, language features) than the surface features of writing (for example, spelling, punctuation, layout) when discussing progress/achievement. 2 = Teacher makes reasonably strong links with the writing processes (forming intentions, crafting, re-crafting, presenting) when discussing students' progress/achievement as developing writers with them. They focus on the deeper features of writing (for example, content, audience awareness, structure, sentence formation, vocabulary, language features) and the surface features of writing (for example, spelling, punctuation, layout) in reasonably equal proportions when discussing progress/achievement. 1 = Teacher makes some links with the writing processes (forming intentions, crafting, re-crafting, presenting) when discussing students' progress/achievement as developing writers with them. They may focus more on the surface features of writing (for example, spelling, punctuation, layout) than the deeper features of writing (for example, content, audience awareness, structure, sentence formation, vocabulary, language features) when discussing progress/achievement.
The teacher indicates 'next steps' to students when commenting on their progress and achievement.	3 = Teacher clearly indicates particular understandings, knowledge, strategies and/or skills students need to focus on if they are to continue making expected progress. This is almost always done in verbal collaboration with the student. Almost all students can articulate some next steps. 2 = Teacher indicates reasonably clearly particular understandings, knowledge, strategies and/or skills students need to focus on if they are to continue making expected progress. This is usually done in verbal collaboration with students. Most students can articulate some of those next steps. 1 = Teacher indicates somewhat clearly what understandings, knowledge, strategies and/or skills students need to focus on if they are to continue making expected progress. This is sometimes done in verbal collaboration with the student. Some/few students can articulate some of those next steps.
The teacher checks that students understand the learning concepts inherent in any feedback/feed-forward they receive and how they are going to address them.	3 = Teacher clearly and directly questions, prompts and probes students' understanding of any feedback/ feed-forward given when it is given. This might include checking what the feedback/feed-forward means, how to address the 'next steps' and what further success would look like. 2 = Teacher questions, prompts and probes reasonably clearly and directly students' understanding of any feedback/feed-forward given when it is given. This might include checking what the feedback/ feed-forward means, how to address the 'next steps' and what further success would look like. 1 = Teacher questions, prompts and probes somewhat clearly and directly students' understanding of any feedback/feed-forward given when it is given. This might include checking what the feedback/ feed-forward means, how to address the 'next steps' and what further success would look like.

The teacher shows respect to students' efforts and work through their comments and actions.	3 = When talking with them about their writing, teacher clearly acknowledges the effort that the student has made, attempts to ascertain their thinking about their writing, gives them time to articulate their thinking, prompts their thinking as necessary, gives them close attention and uses affirming and inclusive language to describe effort and work. Wide range of student writing shared with class during lesson. Wide range of student writing displayed with care around classroom. 2 = When talking with them about their writing, teacher reasonably clearly acknowledges the effort that the student has made, attempts to ascertain their thinking about their writing, gives them time to articulate their thinking, prompts their thinking as necessary, gives them close attention and uses affirming and inclusive language to describe effort and work. Range of student writing shared with class during lesson. Range of student writing displayed with care around classroom. Focus might be on higher achieving students. 1 = When talking with them about their writing, teacher somewhat clearly acknowledges the effort that student has made, attempts to ascertain their thinking about their writing, gives them time to articulate their thinking, prompts their thinking as necessary, gives them close attention and uses affirming & inclusive language to describe effort and work. Some student writing shared with class during lesson. Some student writing displayed around classroom. Focus likely to be on higher achieving students.
Engaging and challenging students	
The teacher presents and explores the learning task in a way that challenges students' cognitive processes.	3 = Writing task offers students strong but manageable cognitive challenges in relation to their current achievement levels. Teacher makes the challenges very clear to students when introducing the task (often through the model that is shared with them). Almost all students can identify the challenges for them. 2 = Writing task offers students reasonable cognitive challenges in relation to their current achievement levels. Teacher makes the challenges reasonably clear when introducing the task. Most students can identify the challenges for them. 1 = Writing task offers students some cognitive challenges in relation to their current achievement levels. Teacher might (or might not) refer to these challenges when introducing the task. Some/few students can identify the challenges.
The teacher presents and explores the learning task in a way that elicits widespread participation that is learning-focused.	3 = Student interest and engagement in the initiating or motivating activity is strongly evident from its point of introduction until its point of completion. Activity elicits direct student participation. Almost all students appear to remain focused on the activity. 2 = Student interest and engagement in the initiating or motivating activity is reasonably evident from its point of introduction until its point of completion. Most aspects of the activity elicit direct student participation. Most students appear to remain focused on the activity. 1 = Student interest and engagement in the initiating or motivating activity is somewhat evident from its point of introduction until its point of completion. Some direct student participation in the activity. Some/few students appear to remain focused on the activity.
The teacher ensures that students are continually and directly engaged in cognitive aspects of the learning goal and/or task throughout the lesson.	3 = Almost all teacher comments to students are learning rather than management-focused (signalling that almost all students are probably focused on activities directly related to the writing task at most points during the lesson). 2 = Most teacher comments to students are learning rather than management-focused (signalling that most students are probably focused on activities directly related to the writing task at most points during the lesson). 1 = Some teacher comments to students are learning rather than management-focused (signalling that some/few students are probably focused on activities directly related to the writing task at most points during the lesson).
The teacher promotes the concept of 'being strategic' as a cognitive asset.	3 = Strong evidence of teacher promoting the concept of 'being strategic' through deliberate use of demonstrating, questioning, prompting and giving feedback actions. 'Being strategic' involves the writer showing audience awareness and principally means selecting and including the most appropriate content/detail, structure and sentence formation features, vocabulary and language features in their writing. Teacher constantly affirms students' attempts at 'being strategic'. 2 = Reasonably strong evidence of teacher promoting the concept of 'being strategic' through deliberate use of demonstrating, questioning, prompting and giving feedback actions. 'Being strategic' involves the writer showing audience awareness and principally means selecting and including the most appropriate content/detail, structure and sentence formation features, vocabulary and language features in their writing. Teacher usually affirms students' attempts at 'being strategic'. 1 = Some evidence of teacher promoting the concept of 'being strategic' through deliberate use of demonstrating, questioning, prompting and giving feedback actions. 'Being strategic' involves the writer showing audience awareness and principally means selecting and including the most appropriate content/detail, structure and sentence formation features, vocabulary and language features in their writing. Teacher sometimes affirms students' attempts at 'being strategic'.

The teacher promotes the concept of 'risk taking' as a cognitive asset.	3 = Strong evidence of teacher promoting the concept of 'risk taking' through deliberate use of demonstrating, questioning, prompting and giving feedback actions. 'Risk taking' involves the writer including elements of content/detail, structure and sentence formation, vocabulary and language features in their texts that they might not normally be expected to include (sometimes successfully). Teacher constantly affirms students' attempts at 'risk taking'. 2 = Reasonably strong evidence of teacher promoting the concept of 'risk taking' through deliberate use of demonstrating, questioning, prompting and giving feedback actions. 'Risk taking' involves the writer including elements of content/detail, structure and sentence formation, vocabulary and language features in their texts that they might not normally be expected to include (sometimes successfully). Teacher usually affirms students' attempts at 'risk taking'. 1 = Some evidence of teacher promoting the concept of 'risk taking' through deliberate use of demonstrating, questioning, prompting and giving feedback actions. 'Risk taking' involves the writer including elements of content/detail, structure and sentence formation, vocabulary and language features in their texts that they might not normally be expected to include (sometimes successfully). Teacher sometimes affirms students' attempts at 'risk taking'.
The teacher attends to differentiated learning needs through individualised or small group instruction and interactions.	3 = Strong evidence that teacher works with students in individualized or small group instructional writing contexts for the greater part of the lesson. Grouping (long term or occasional) clearly based on students' strengths and needs gleaned from a range of assessment items. Teacher can clearly demonstrate/articulate how they do this. Researcher can clearly recognize links between assessment data and student strengths and needs for each group. 2 = Reasonably strong evidence that teacher works with students in individualized or small group instructional writing contexts for the greater part of the lesson. Grouping (when done) usually based on strengths and needs gleaned from a range of assessment items. Teacher can demonstrate/articulate reasonably clearly if and how they do this. Researcher can recognize links between assessment data and student strengths and needs for each group reasonably clearly but with some inference required. 1 = Some evidence that teacher works with students in individualized or small group instructional writing contexts for the greater part of the lesson. Teacher appears to take account of assessment items for grouping (when done) but it is sometimes difficult for researcher to recognize links between assessment data and student strengths and needs.
The teacher differentiates their use of instructional approaches and strategies according to students' strengths and needs.	3 = Strong evidence of teacher using a range of instructional strategies with each group and clearly differentiating the questions, prompts, demonstrations, explanations, directions and feedback statements used with each group. Teacher can clearly articulate their rationale for adjusting their teaching at particular times with particular groups. 2 = Reasonably strong evidence of teacher using a range of instructional strategies with each group and differentiating the questions, prompts, demonstrations, explanations, directions and feedback statements used with each group. Teacher can articulate their rationale for adjusting their teaching at particular times with particular groups reasonably clearly (but some researcher inference might be required). 1 = Some evidence of teacher using a range of instructional strategies with each group and differentiating the questions, prompts, demonstrations, explanations, directions and feedback statements used with each group. Teacher can articulate their rationale for adjusting their teaching at particular times with particular groups (if adjustments are made) somewhat clearly (though strong researcher inference might be required).
The teacher ensures that text generated or skills practised through the lesson are at a level appropriate to students' expected outputs.	3 = Teacher clearly articulates and/or demonstrates students' expected outputs and gives direct feedback to students about their output in relation to expectations. Comments are made at both the class/group and individual level. Teachers' comments suggest that students are almost always encouraged to expand the level of challenge they pursue. 2 = Teacher reasonably clearly articulates and/or demonstrates students' expected outputs and gives reasonably direct feedback to students about their output in relation to expectations. Comments are made at both the class/group and individual level but more at the class/group level. Teachers' comments suggest that students are usually encouraged to expand the level of challenge they pursue. 1 = Teacher somewhat clearly articulates and/or demonstrates students' expected outputs and gives somewhat direct feedback to students about their output in relation to expectations. Comments are principally made at the class/group level, though some comments may be directed to individual students. Teachers' comments suggest that students are sometimes encouraged to expand the level of challenge they pursue.
The teacher checks that students understand how their current learning links to their anticipated learning.	3 = Teacher clearly articulates and/or demonstrates how students' current learning goals link to what students are expected to achieve long term as writers. Almost all students can articulate how their current learning links to their anticipated learning. 2 = Teacher reasonably clearly articulates and/or demonstrates how students' current learning goals link to what students are expected to achieve long term as writers. Many students can articulate how their current learning links to their anticipated learning.

	1 = Teacher somewhat clearly articulates and/or demonstrates how students' current learning goals link to what students are expected to achieve long term as writers. Some students can articulate how their current learning links to their anticipated learning.
Organisation and Management	
The teacher breaks down writing lessons into easily identifiable stages.	3 = Stages as planned for lesson (e.g. setting a purpose, initiating or motivating activity, demonstration, practice, plenary) implemented and able to be recognised clearly by the researcher. Teacher able to articulate rationale of undertaking each stage clearly. 2 = Stages as planned for lesson (e.g. setting a purpose, initiating or motivating activity, demonstration, practice, plenary) implemented and able to be recognised reasonably clearly by the researcher. This may require a small amount of inference. Teacher able to articulate rationale of undertaking each stage reasonably clearly. 1 = Stages as planned for lesson (e.g. setting a purpose, initiating or motivating activity, demonstration, practice, plenary) implemented but require some inference to be recognised by the researcher. Teacher able to articulate rationale of undertaking each stage somewhat clearly.
The teacher sets manageable time allocations during the lesson. This should lead to students achieving an output that matches teacher's articulated expectations.	3 = Lesson is well managed time-wise in that almost all students appear to achieve what they are expected to achieve at each stage in allocated time. Almost all students can demonstrate that they achieved an output that matches teacher's articulated expectations. 2 = Lesson is reasonably well managed time-wise in that most students appear to achieve most of what they are expected to achieve at each stage in allocated time. Most students can demonstrate that they achieved an output that matches teacher's articulated expectations. 1 = Lesson is somewhat well managed time-wise in that some/few students appear to achieve what they are expected to achieve at each stage in allocated time. Some/few students can demonstrate that they achieved an output that matches teacher's articulated expectations.
The teacher makes instructional contact on an equitable basis with all students during writing lessons.	3 = Evidence of teacher making instructional contact with almost all students on a mostly equitable basis during the lesson. This means cognitively engaging almost all students at some point during the lesson through strategic use of questioning, prompting, demonstrating, explaining, directing and/or giving feedback on an aspect of writing and without appearing to give undue or unjustified attention to particular students. Teacher can clearly identify students who require additional attention and can clearly articulate how they provide this attention. 2 = Evidence of teacher making instructional contact with most students on a reasonably equitable basis during the lesson. This means cognitively engaging most students at some point during the lesson through strategic use of questioning, prompting, demonstrating, explaining, directing and/or giving feedback on an aspect of writing. Teacher can identify students who require additional attention and how they provide this attention reasonably clearly (but some inference might be required). 1 = Evidence of teacher making instructional contact with some students on a somewhat equitable basis during the lesson. This means cognitively engaging some students at some point during the lesson through strategic use of questioning, prompting, demonstrating, explaining, directing and/or giving feedback on an aspect of writing. Teacher can identify students who require additional attention and how they provide this attention somewhat clearly (a great deal of researcher inference might be required).
The teacher provides sufficient opportunities for students to develop and practise their writing skills within the lesson.	3 = Students get opportunity to practise what they have been taught for most of the lesson (more than 50%). 2 = Students get opportunity to practise what they have been taught for some of the lesson (30-50%). 1 = Students get opportunity to practise what they have been taught for small section of the lesson (less than 30%).
The teacher maintains records of students' individual progress and achievement as developing writers.	3 = Evidence of teacher maintaining clear and detailed records of individual student's progress and achievement as developing writers. This means keeping notes and/or annotated writing samples that indicate students' strengths, needs and progress in relation to expected progress and outcomes in an organized and useful manner. 2 = Evidence of teacher maintaining reasonably clear and detailed records of individual student's progress and achievement as developing writers. This means keeping some notes and/or annotated writing samples that indicate students' strengths, needs and progress in relation to expected progress and outcomes in a reasonably well organized and useful manner. Some inference might be required to understand them. 1 = Teacher maintains some/few records of individual student's progress and achievement as developing writers. Those records that are maintained are unlikely to be clear and detailed. A great deal of inference might be required to understand them.

The teacher ensures that the lesson operates to transparent and clearly understood routines, directions and behavioural expectations.	3 = Evidence that almost all students appear to know what to do/what is expected of them, and remain largely focused on the writing task during writing lesson. Occasional teacher comments only during the lesson are management (rather than learning) focused. Teacher checks continually that instructions have been heard and understood. 2 = Evidence that most students appear to know what to do/what is expected of them, and remain largely focused on the writing task during writing lesson. Some teacher comments during the lesson are management (rather than learning) focused. Teacher checks reasonably often that instructions have been heard and understood. 1 = Evidence that some students appear to know what to do/what is expected of them, and remain largely focused on the writing task during writing lesson. Many teacher comments during the lesson are management (rather than learning) focused. Teacher checks on occasions that instructions have been heard and understood.
Expectations	
The teacher holds and articulates a clear vision of what most students can reasonably be expected to achieve over time.	3 = Teacher can explain clearly (during initial interview) what writing strategies and skills most students in cohort they teach can reasonably be expected to achieve over the year. They make explicit mention of national and/or local expectations (especially those contained in the NZC and related documents) when explaining their expectations. Researcher can recognise clear links between the teacher's articulated expectations and the expectations documented in national and/or local guidelines. 2 = Teacher can explain reasonably clearly (during initial interview) what writing strategies and skills most students in cohort they teach can reasonably be expected to achieve over the year. They make some mention of national and/or local expectations (especially those contained in the NZC and related documents) when explaining their expectations. Researcher can recognise reasonably clear links between the teacher's articulated expectations and the expectations documented in national and/or local guidelines. 1 = Teacher can explain somewhat clearly (during initial interview) what writing strategies and skills most students in cohort they teach can reasonably be expected to achieve over the year. Their expectations might or might not be linked to national and/or local expectations (especially those contained in the NZC and related documents). If they are linked, researcher might need to make strong inferences in order to recognise links.
The teacher holds and articulates a clear vision of particular needs of particular students.	3 = Teacher can explain clearly (through ongoing interviews) particular learning needs of particular students in their class. They make clear links between their understanding of needs and assessment-based evidence of student needs. Evidence has been gained through use of a wide range of formal and/or informal assessment tools. 2 = Teacher can explain reasonably clearly (through ongoing interviews) particular learning needs of particular students in their class. They make reasonably clear links between their understanding of needs and assessment-based evidence of student needs. Evidence has been gained through a range of formal and/or informal assessment tools. 1 = Teacher can explain somewhat clearly (through ongoing interviews) particular learning needs of particular students in their class. They make some/occasional links between their understanding of needs and assessment-based evidence of student needs. Any evidence gained has been through a limited range of formal and/or informal assessment tools.
The teacher links their vision of achievement and practices to cross-curricular writing demands.	3 = Strong evidence (through interviews) that: • instructional writing is planned and implemented within learning contexts other than English; • teacher thinks closely about 'what quality writing looks like' in learning contexts other than English. 2 = Reasonably strong evidence (through interviews) that: • instructional writing is planned and implemented within learning contexts other than English; • teacher thinks closely about 'what quality writing looks like' in learning contexts other than English. 1 = Somewhat strong evidence (through interviews) that: • instructional writing is planned and implemented within learning contexts other than English; • teacher thinks closely about 'what quality writing looks like' in learning contexts other than English.

The teacher communicates high expectations for student attainment during the lesson.	3 = Strong evidence that teacher communicates high expectations for attainment to students. This is clearly evident in (for example) classroom goals, demonstrations, task selection, text models, feedback statements. Almost all students can explain with accuracy what the teacher expects them to be able to do and achieve within a lesson. 2 = Reasonably strong evidence that teacher communicates high expectations for attainment to students. This is reasonably evident in (for example) classroom goals, demonstrations, task selection, text models, feedback statements. Most students can explain with accuracy what the teacher expects them to be able to do and achieve within a lesson. 1 = Some evidence that teacher communicates high expectations for attainment to students. This is somewhat evident in (for example) classroom goals, demonstrations, task selection, text models, feedback statements. Some/few students can explain with accuracy what the teacher expects them to be able to do and achieve within a lesson.
The teacher ensures that presentation of the writing classroom reflects high achievement expectations.	3 = Classroom contains many rich examples of written text. Examples are principally student-generated and represent a range of cross-curricular contexts. Examples are accessible to students and are carefully displayed. 2 = Classroom contains some rich examples of written text. Most examples are student-generated. There is some evidence that they represent cross-curricular contexts. Examples are reasonably accessible to students and are displayed reasonably carefully. 1 = Classroom contains few rich examples of written text. Some examples are student-generated. Limited evidence that they represent cross-curricular contexts. Limited attention given to accessibility of texts for students or careful display of texts.
Self-regulation	
The teacher ensures that students receive regular opportunities to write independently or in collaboration with others outside the prescribed instructional writing period.	3 = Strong evidence that students write independently (or in collaboration with others) outside the prescribed instructional writing period. They might do this by (for example) writing for curriculum contexts other than English; undertaking diary writing tasks; undertaking 'free writing' tasks. Sustained evidence might be found in students' draft writing books, cross-curricular exercise books and/or displays of student texts. 2 = Reasonably strong evidence that students write independently (or in collaboration with others) outside the prescribed instructional writing period. They might do this by (for example) writing for curriculum contexts other than English; undertaking diary writing tasks; undertaking 'free writing' tasks. Some evidence might be found in students' draft writing books, cross-curricular exercise books and/or displays of student texts. 1 = Some/limited evidence that students write independently (or in collaboration with others) outside the prescribed instructional writing period. They might do this by (for example) writing for curriculum contexts other than English; undertaking diary writing tasks; undertaking 'free writing' tasks. Occasional evidence might be found in students' draft writing books, cross-curricular exercise books and/or displays of student texts.
The teacher provides students with regular and sufficient time and opportunity to write on self-selected topics.	3 = Evidence (through interviews) that teacher provides students with regular and frequent opportunities to write on self-selected topics with little teacher direction. These occasions can be both during and outside instructional writing lessons. 2 = Evidence (through interviews) that teacher provides students with reasonably regular and frequent opportunities to write on self-selected topics with little teacher direction. These occasions can be both during and outside instructional writing lessons. 1 = Evidence (through interviews) that teacher provides students with some opportunities to write on self-selected topics with little teacher direction. These occasions can be both during and outside instructional writing lessons.

The teacher requires students to set personal learning goals according to their perceived strengths and needs.	3 = Strong evidence that teacher requires students to set personal learning goals. Almost all students can demonstrate that they set personal learning goals. Those who use them can clearly articulate what their personal goals are and how they relate to their personal strengths and needs. They also clearly recognize links between their personal learning goals and class/group learning goals. 2 = Reasonably strong evidence that teacher requires students to set personal learning goals. Most students can demonstrate that they set personal learning goals. Those who use them can articulate reasonably clearly what their personal goals are and how they relate to their personal strengths and needs. They might be able to recognize links between their personal learning goals and class/group learning goals – though researcher might have to do some inferring when discussing personal learning goals with students. 1 = Some evidence that teacher requires students to set personal learning goals. Some/few students can demonstrate that they set personal learning goals. Those who use them can somewhat clearly articulate what their personal goals are and how they relate to their personal strengths and needs. They might be able to recognize links between their personal learning goals and class/group learning goals - though researcher might have to do much inferring when discussing personal learning goals with students.
The teacher encourages students to self-monitor their progress and achievement in relation to personal learning goals and criteria for success as they plan, craft and re-craft texts.	3 = Strong evidence that teacher encourages students to self-monitor their progress in relation to personal learning goals. Almost all students can articulate clearly what they have to do to be successful at meeting their personal goals and how they adjust their goals according to what they find out about themselves as writers (from both self-reflection and teachers' comments). 2 = Reasonably strong evidence that teacher encourages students to self-monitor their progress in relation to personal learning goals. Most students can articulate clearly what they have to do to be successful at meeting their personal goals and how they adjust their goals according to what they find out about themselves as writers (from both self-reflection and teachers' comments). Researcher might have to do some inferring when discussing self-monitoring with students. 1 = Some evidence that teacher encourages students to self-monitor their progress in relation to personal learning goals. Some/few students can articulate clearly what they have to do to be successful at meeting their personal goals and how they adjust their goals according to what they find out about themselves as writers (from both self-reflection and teachers' comments). Researcher might have to do much inferring when discussing self-monitoring with students.
The teacher discusses students' writing with them in relation to students' personal learning goals and criteria for success.	3 = Strong or reasonably strong evidence that teacher discusses students' writing with them in relation to their personal learning goals, especially when giving feedback. 2 = Some evidence that teacher discusses students' writing with them in relation to their personal learning goals, especially when giving feedback. 1 = Limited evidence that teacher discusses students' writing with them in relation to their personal learning goals, especially when giving feedback.
The teacher encourages students to assume responsibility for seeking, gaining and using support to address identified writing challenges.	3 = Strong or reasonably strong evidence of students being proactive about the support and/or learning they require as developing writers. Their decision-making about required support/learning may (or may not) be guided by the teacher. 2 = Some evidence of students being proactive about the support and/or learning they require as developing writers. Students sometimes directed by the teacher to seek support/learning. 1 = Limited evidence of students being proactive about the support and learning they require as developing writers. Students mostly directed by the teacher to seek support/learning.
The teacher provides sufficient opportunities for students to work collaboratively and talk about their writing with others during the lesson – what they are doing, thinking, learning and/or achieving.	3 = Students regularly talk with each other during writing lessons about what they are writing and what they are doing and learning as writers. Some talk arises from teacher-promoted and planned opportunities (e.g. student group conferences, buddy conferences, think-pair-share occasions, class sharing of ideas); some talk arises from unplanned student-student interactions. Opportunities arise regularly and automatically during writing lessons. 2 = Students talk with each other reasonably regularly during writing lessons about what they are writing and what they are doing and learning as writers. Some talk arises from teacher-promoted and planned opportunities (e.g. student group conferences, buddy conferences, think-pair-share occasions, class sharing of ideas); some talk arises from unplanned student-student interactions. Opportunities arise reasonably regularly and automatically during writing lessons. 1 = Students talk with each other somewhat regularly during writing lessons about what they are writing and what they are doing and learning as writers. Some talk arises from teacher-promoted and planned opportunities (e.g. student group conferences, buddy conferences, think-pair-share occasions, class sharing of ideas); some talk arises from unplanned student-student interactions. Opportunities do not appear to arise somewhat regularly and automatically during writing lessons.
The teacher provides sufficient opportunities for students to reflect on and articulate what they are doing, thinking about,	3 = Strong evidence that students reflect with the teacher, with each other and/or independently about what they are doing, thinking about, learning and achieving as writers, and how they will use this understanding in subsequent writing tasks. Reflections might be evident in planned and unplanned teacher-student interactions during writing lessons and/or student reflection notes or

learning and achieving during the lesson and how they can apply this understanding to subsequent writing tasks.	journals. 2 = Reasonably strong evidence that students reflect with the teacher, with each other and/or independently about what they are doing, thinking about, learning and achieving as writers, and how they will use this understanding in subsequent writing tasks. Reflections might be evident in planned and unplanned teacher-student interactions during writing lessons and/or student reflection notes or journals, though this is not always evident. 1 = Some evidence that students reflect with the teacher, with each other and/or independently about what they are doing, thinking about, learning and achieving as writers, and how they will use this understanding in subsequent writing tasks. Reflections might be evident in planned and unplanned teacher-student interactions during writing lessons and/or student reflection notes or journals, though this is occasionally evident.
The teacher ensures that there are sufficient classroom resources available for students to problem solve with independently.	3 = Strong evidence that electronic and print resources (e.g. dictionaries, thesauruses) are readily available and accessible to all students; that teacher refers to and/or uses them strategically during writing lessons; and that students use them automatically and strategically to solve writing problems (e.g. word meaning, content decisions, spelling) when crafting and re-crafting. 2 = Reasonably strong evidence that electronic and print resources (e.g. dictionaries, thesauruses) are readily available and accessible to all students; that teacher refers to and/or uses them strategically during writing lessons; and that students use them automatically and strategically to solve writing problems (e.g. word meaning, content decisions, spelling) when crafting and re-crafting. 1 = Some evidence that electronic and print resources (e.g. dictionaries, thesauruses) are readily available and accessible to all students; that teacher refers to and/or uses them strategically during writing lessons; and that students use automatically and strategically them to solve writing problems (e.g. word meaning, content decisions, spelling) when crafting and re-crafting.

Appendix D: Initial teacher interview schedule

Background and experiences

- How long have you been teaching?
- What qualifications did you leave university and/or College of Education with?
- What qualifications have you acquired since then?
- Any qualifications with a literacy focus?
- Tell me about the range of schools you have taught in – their location, their size, their types (e.g., contributing, full primary, intermediate), their decile rating, their main ethnic groupings? How long have you taught in each school?
- What class levels have you taught in? How many years at each class level (junior, middle, senior)?
- Is there a class level you prefer to teach at? Why?
- You are now teaching in the senior level – do you think that your experience teaching other levels [if appropriate] has contributed in any way to your effectiveness as a teacher of senior students? How? What has been the consequence of this?
- Tell me about your pre-service training [for teachers who have been teaching less than 5 years]? When, where and how long? Do you feel that it prepared you well as a teacher of literacy? How?
- What in-service training have you undertaken over the past 5 years that has had a focus on literacy professional development? How has this helped you become a more effective teacher of literacy?
- What other in-service training have you undertaken over the past 5 years that has had links with literacy, e.g., assessment? How has this helped you become a more effective teacher of literacy?

- Can you think of any professional reading that you have undertaken over the past 2 years that has helped you become a more effective teacher of literacy? What was it? How has it helped you?

Knowledge and understanding of writing and writers

- What does the term 'the writing process' mean to you as a classroom teacher?
- What is your understanding of 'what writers do' as they create texts? Think of all the processes (or stages) that they move between. Think also of all the strategies and skills they use as they write.
- What do you expect a Year 5, 6, 7 or 8 student (as appropriate) who is deemed to be an 'effective writer' to be able to demonstrate in their writing? Think of both the deeper and surface features of writing.
- Why do you think some Year 5-8 students do not make the progress that we expect them to make as developing writers?
- How important do you believe 'self-efficacy' (perceived competence) is to being an 'effective writer'?
- National achievement data tells us that there is an achievement gap between boys and girls as writers. Why do you think this is?
- National achievement data also tells us that there is an achievement gap between Māori and non-Māori students as writers. Why do you think this is?
- National achievement data also tells us that there is an achievement gap between Pasifika and non-Pasifika students as writers. Why do you think this is?
- We read that "teachers who exemplify 'best practice' make explicit the connections between reading and writing" (ELP5-8, p. 124). How can teachers do this? How does this help students become better writers?
- We also read that literacy learning "occurs, and should be planned for, across all areas of the curriculum" (ELP5-8, p. 28). How do you think teachers can best

encourage students to apply what they have learnt about being a good writer to other areas of the curriculum?

Use of effective instructional strategies

- Think of a writing lesson that you have led recently that you consider was effective in terms of students' learning. How long was the lesson? What happened in it? Think particularly about the different stages of the lesson. What did you do? What did the students do?

- We read that "it is the teacher's strategic use of instruction that makes the difference" (ELP5-8, p. 81). Define and describe each of these instructional strategies using examples from a writing lesson (probably from the writing lesson that you have just described)?

    - Goal-setting.

    - Modelling.

    - Giving feedback.

- How effective do you believe that you are in using each of these instructional strategies to help your students become effective writers? Think in terms of 'very effective', effective, 'quite effective', 'a little bit effective', 'not very effective'. Justify your thinking with examples of what you 'do' or 'not do' in relation to each strategy.

- Teachers use a range of verbal and non-verbal techniques to foster student learning through their use of instructional strategies. For example, they question, prompt, probe, explain, tell and direct their students on occasions. What would you expect to be obvious if a teacher was questioning, prompting, probing, explaining, telling and/or directing his/her students effectively?

- Do you believe that there any particular instructional approaches and/or strategies that are especially effective for particular cohorts of students, e.g., boys, Māori students, Pasifika students? Why do you say that? What is your reason for nominating that or those ones?

- Are there any other strategies that you believe you use that are effective for your students as developing writers that we have not mentioned?

Knowledge and understanding of other teacher and classroom writing issues

- If you had to provide a new teacher with the three most important criteria for a sound writing program, what would these be?

- If I was to walk into your classroom during a writing lesson that you felt was going well, what would you expect me to see, hear and feel in the room?

- How do you go about determining what strategies and skills you will teach in a writing lesson?

- How much writing practice do you think students should be getting in each week? How is this best accomplished? Should writing instruction be timetabled or should it be integrated into cross-curricular teaching and learning?

- Are there any resources that you find particularly useful for the teaching of writing? Think about both print and digital resources. I want you to think of three resources that you could not do without in teaching writing!

Appendix E: Pre and post observation teacher interview schedule

Pre-observation

- What do you propose to do in the lesson?
- What do you expect your students to achieve from the lesson?
- How and why did you select the learning goal/s for this lesson that you have selected?
- Are there any particular instructional strategies that you anticipate using to help your students meet the learning goal/s?
- How will you know whether you (and they) have been successful in relation to what you expect them to achieve?

Post-observation

- How effective was the lesson in relation to student outcomes? Think in terms of 'very effective', 'quite effective', 'a little bit effective', 'not very effective'. How do you know how effective it was?
- Do you think it was any more or less effective for particular groups of students? If so, what groups? How do you know this? What did you do about it?
- Do you think your students knew what they were expected to do, know about and achieve in the lesson? How do you know this?
- Describe the instructional strategies that you believe you used. You might find it useful to refer to the following list:

    - Goal-setting.
    - Modelling.
    - Giving feedback.

- Can you explain why you decided to use any of these strategies at particular points in the lesson? Why did you select them?

- Were any of the instructional strategies that you used more or less effective than others in relation to student outcomes? How do you know?

- Were any of them more or less effective than others for any particular cohorts of students (boys, Māori students, Pasifika students) in relation to outcomes? How do you know?

- Describe the verbal and non-verbal teaching techniques that you believe you used to foster student learning. You might find it useful to refer to the following list:

    - Questioning.
    - Prompting.
    - Telling.
    - Explaining.
    - Directing.

- Can you explain why you decided to use any of these techniques at particular points in the lesson? Why did you select them?

- Did you plan to use any of these techniques or did you use them intuitively?

- Can you think of any occasion during the lesson when you shifted the focus or changed the direction from what you anticipated doing? What prompted you to shift focus or change direction? Was it an easy change to make?

- How did you attempt to meet the diverse learning needs of your students in the lesson? How successful were you at this? How do you know?

- How did you monitor what your students were doing and achieving during the lesson?

- Do you believe that your students made the progress that you expected them to make? Think in terms of ‘all students’, ‘most students’, ‘some students’, ‘no students’. How do you know?

- Do you believe that any particular cohorts of students made more or less progress than others? Why do you think this was? How do you know?

- Can you think of any other variables that might have influenced student outcomes in the lesson? (e.g., perceived task value, topic selection, organisation, resource availability).

- How will you use any student progress and achievement information that you gained from the lesson (both in the short term and in the long term)?

- Reflecting back on the lesson, what might you have done differently during the lesson and how might this have affected student outcomes?

Appendix F: Final teacher interview schedule

Goal setting

- Where do your lesson goals come?
- Are your students involved in constructing lesson goals? How involved are they?

Modelling

Modelling is often a combination of three different instructional approaches: shared or collaborative writing; deconstructing an existing text with students; and demonstrating for students. What is your preferred approach or combination of approaches? Where do you sit most comfortably with regard to these approaches? What might this look like in a writing lesson?

Being flexible

- How flexible are you when lessons do not proceed as you had planned? Can you give me an example?
- How flexible are you when students develop an unanticipated interest in a new aspect of learning in a lesson? can you give me an example of utilising a 'teachable moment'?

Showing respect to students

- How do you think you show respect to your students as developing writers?
- How do you think they know that you actually respect them?

Using the language of writing

- Do you tend to use the technical language of writing during writing lessons?
- Why (or why not) is it important to use the correct terminology?

Grouping for writing

- Do you have writing groups?

- How does this work on a daily basis?
- Do you differentiate your planning for groups? What does this look like?
- Do you differentiate your instructional strategies for groups? What does this look like?

Maintaining records

- What sort of progress and achievement records do you maintain of your students' development as writers, both on a day-to-day basis and on a long-term basis?

Frequency of instructional writing

- How often do you try and actually teach writing? How many days a week?
- How long does each instructional session normally last for?

Selecting writing topics

- How do you select writing topics? Are they mainly selected by you or your students?
- Do you students ever get 'free writing' opportunities during which they can write on anything they want?

Personal learning goals

- Do your students set personal learning goals for writing?
- How do they go about this?
- How are they used during writing lessons?

Classroom resources

- What sort of electronic resources are important to you in the teaching of writing?
- What is the role of computers in your writing programme?
- Are there any particular hard copy or paper resources that are important to you in the teaching of writing?

Appendix G: 'Touchstone students' interview schedule

- What did you do during the writing lesson today? What did you write about? How come you wrote about that?

- How did you feel about the task that you were asked to do? Really good? Good? OK? A little bit OK? Not good? Why did you feel that?

- How difficult was it for you? Really easy? Quite easy? A little bit easy? A little bit difficult? Quite difficult? Really difficult?

- How do you think you got on? Did you achieve what you wanted to achieve? How do you know? If it was difficult, what made it difficult?

- What do you think the teacher wanted you to achieve? How do you know that? How will that help you become a better writer?

- Can you think of anything special that the teacher did during the lesson that helped you know what to do or helped you be more successful? [prompts to goal setting, modelling or giving feedback if necessary].

- Do you think you achieved what the teacher wanted you to achieve? How do you know?

- So what are you going to work on next to become a better writer? What help will you need for this?

References

Akey, T. M. (2006). *School context, student attitudes and behavior, and academic achievement: An exploratory analysis*. Retrieved from MDRC website: http://www.mdrc.org/sites/default/files/full_519.pdf

Allington, R. L. (2002). What I've learned about effective reading instruction. *Phi Delta Kappan, 83*(10), 740–747.

Allington, R. L., & Johnston, P. H. (2000). *What do we know about effective fourth-grade teachers and their classrooms?* (Report Series 13010). Retrieved from University of Albany website: http://www.albany.edu/cela/reports/allington/allington4thgrade13010.pdf

Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis*. Wellington, New Zealand: Ministry of Education.

Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*(3), 261–271. doi:10.1037/0022-0663.84.3.261

Ames, C., & Ames, R. (1984). Systems of student and teacher motivation: Towards a qualitative definition. *Journal of Educational Psychology, 76*(4), 535–556. doi:10.1037/0022-0663.76.4.535

Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology, 80*(3), 260–267. doi:10.1037/0022-0663.80.3.260

Applebee, A. N., & Langer, J. A. (1983). Instructional scaffolding: Reading and writing as natural language activities. *Language Arts, 60*(2), 168–175.

Atwell, N. (1987). *In the middle: Writing, reading and learning with adolescents*. Portsmouth, NH: Heinemann.

Aulls, M. W. (2002). The contributions of co-occurring forms of classroom discourse and academic activities to curriculum events and instruction. *Journal of Educational Psychology, 94*(3), 520–538. doi:10.1037/0022-0663.94.3.520

Ball, D. L., Thames, M. H., & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of Teacher Education, 59*(5), 389–405. doi:10.1177/0022487108324554

Balzer, W. K., Doherty, M. E., & O'Connor, R. (1989). Effects of cognitive feedback on performance. *Psychological Bulletin, 106*(3), 410–433. doi:10.1037/0033-2909.106.3.410

Bandura, A., & Schunk, D. H. (1981). Cultivating competence, self-efficacy and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology, 41*(3), 586–598. doi:10.1037/0022-3514.41.3.586

Bangert-Drowns, R. (1993). The word processor as an instructional tool: A meta-analysis of word processing in writing instruction. *Review of Educational Research, 63*(1), 69–93. doi:10.3102/00346543063001069

Banks, J., Cochran-Smith, M., Moll, L., Richert, A, Zeichner, K., LePage, P., . . . Duffy, H. (2005). Teaching diverse learners. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 232–274). San Francisco, CA: Jossey-Bass.

Bell, J. (2005). *Doing your research project: A guide for first-time researchers in education, health and social science* (4th ed.). Maidenhead, England: Open University Press.

Benson, B. K (1997). Scaffolding: Coming to terms. *The English Journal, 86*(7), 126–127. doi:10.2307/819879

Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Bereiter, C., & Scardamalia, M. (1993). *Surpassing ourselves: An inquiry into the nature and implications of expertise*. La Salle, IL: Open Court.

Berliner, D. C. (2001). Learning about and learning from expert teachers. *International Journal of Educational Research, 35*(5), 463–482. doi:10.1016/S0883-0355(02)00004-6

Berliner, D. C. (2002). Educational research: The hardest science of all. *Educational Researcher, 31*(8), 18–20. doi:10.3102/0013189X031008018

Berliner, D. C. (2004). Describing the behaviour and documenting the accomplishments of expert teachers. *Bulletin of Science, Technology & Society, 24*(3), 200–212. doi:10.1177/0270467604265535

Berry, R. A. W. (2006). Beyond strategies: Teacher beliefs and writing instruction in two primary inclusion classrooms. *Journal of Learning Disabilities, 39*(1), 11–24. doi:10.1177/00222194060390010301

Birch, S. H., & Ladd, G. W. (1997). The teacher-child relationship and children's early school adjustment. *Journal of School Psychology, 35*(1), 61–79. doi:10.1016/S0022-4405(96)00029-5

Bishop, R., Berryman, M., Cavanagh, T., & Teddy, L. (2007). *Te Kōtahitanga Phase 3 Whānaungatanga: Establishing a culturally responsive pedagogy of relations in mainstream secondary school classrooms.* Wellington, New Zealand: Ministry of Education.

Bitchener, J., Young, S., & Cameron, D. (2005). The effect of different types of corrective feedback on ESL student writing. *Journal of Second Language Writing, 14*(3), 191–205. doi:10.1016/j.jslw.2005.08.001

Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2003). *Assessment for learning: Putting it into practice*. Maidenhead, England: Open University Press.

Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education, 5*(1), 7–74. doi:10.1080/0969595980050102

Block, C. C., & Israel, S. E. (2004). The ABCs of performing highly effective think-alouds. *The Reading Teacher, 58*(2), 154–167. doi:10.1598/RT.58.2.4

Block, C. C., & Mangieri, J. N. (2003). *Exemplary literacy teachers: Promoting success for all children in grades K-5*. New York, NY: The Guilford Press.

Block, C. C., Oakar, M., & Hurt, N. (2002). The expertise of literacy teachers: A continuum from preschool to Grade 5. *Reading Research Quarterly, 37*(2), 178–206. doi:10.1598/RRQ.37.2.4

Bloom, B. (1956). *Taxonomy of educational objectives: The classification of educational goals: Handbook I. Cognitive domain*. New York, NY: Longmans Green.

Blumenfeld, P. C. (1992). Classroom learning and motivation: Clarifying and expanding goal theory. *Journal of Educational Psychology, 84*(3), 272–281. doi:10.1037/0022-0663.84.3.272

Bodrova, E., & Leong, D. J. (1998). Scaffolding emergent writing in the zone of proximal development. *Literacy Teaching and Learning, 3*(2), 1–18.

Bond, L., Smith, T., Baker, W. K., & Hattie, J. A. (2000). *The certification system of the National Board for Professional Teaching Standards: A construct and consequential validity study*. Greensboro, North Carolina: Center for Educational Research and Evaluation.

Bong, M. (2004). Academic motivation in self-efficacy, task value, achievement goal orientations and attributional beliefs. *Journal of Educational Research, 97*(6), 287–297. doi:10.3200/JOER.97.6.287-298

Borkowski, J. G. (1992). Metacognitive theory: A framework for teaching literacy, writing and math skills. *Journal of Learning Disabilities, 25*(4), 253–257. doi:10.1177/002221949202500406

Bossert, S. T. (1979). *Tasks and social relationships in classrooms.* Cambridge, England: Cambridge University Press.

Bransford, J. D., Derry, S. J., Berliner, D. C., & Hammerness, K. (2005). Theories of learning and their roles in teaching. In L. Darling-Hammond & J. D. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 40–87). San Francisco, CA: Jossey-Bass.

Brenner, M. E. (2006). Interviewing in educational research. In J. L. Green, G. Camilli, & P. B. Elmore (Eds.), *Handbook of complementary methods in educational research* (pp. 357–370). Mahwah, NJ: Lawrence Erlbaum Associates.

Brophy, J. (1983). Research on the self-fulfilling prophecy and teacher expectations. *Journal of Educational Psychology, 75*(5), 631–661. doi:10.1037/0022-0663.75.5.631

Brown, D., Reumann-Moore, R., Hugh, R., Cristman, J. B., & Riffer, M. (2008). *Links to learning and sustainability: Year Three report of the Pennsylvania high school coaching initiative.* Philadelphia, PA: Research for Action.

Burchinal, M. R., Peisne-Feinberg, E., Pianta, R., & Howes, C. (2002). Development of academic skills from preschool to second grade: Family and classroom predictors of developmental trajectories. *Journal of School Psychology, 40*(4), 415–436. doi:10.1016/S0022-4405(02)00107-3

Butler, D. L., & Winne, P. H. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research, 65*(3), 245–274. doi:10.3102/00346543065003245

Calkins, L. M. (1994). *The art of teaching writing*. Portsmouth, NH: Heinemann.

Caracelli, V. J., & Greene, J. C. (1993). Data analysis strategies for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis, 15*(2), 195–207. doi:10.3102/01623737015002195

Carrington, V. (2006). *Rethinking middle years: Early adolescents, schooling and digital culture*. Crows Nest, Australia: Allen & Unwin.

Catlin, K. S, Lewen, G. J., & Perignon, B. J. (1999). Increasing student engagement through goal setting, cooperative learning and student choice. Retrieved from ERIC database. (ED433100)

Cazden, C. B., (1993). *Immersing, revealing and telling: A continuum from implicit to explicit teaching*. A plenary address to the International Conference on Teacher Education in Second Language Learning, Hong Kong. Retrieved from http://files.eric.ed.gov/fulltext/ED365134.pdf

Chalk, J. C., Hagan-Burke, S., & Burke, M. D. (2005). The effects of self-regulated strategy development on the writing process for high school students with learning disabilities. *Learning Disability Quarterly, 28*(1), 75–87. doi:10.2307/4126974

Chetty, R., Friedman, J. N., & Rockoff, J. E. (2011). *The long-term impacts of teachers: Teacher value-added and student outcomes in adulthood* (Working Paper No. 17699). Retrieved from National Bureau of Economic Research website: http://www.nber.org/papers/w17699#navDiv=6

Chi, M. T. H., Bassok, M., Lewis, M. W., Reimann, P., & Glaser, S. (1989). Self-explanations: How students study and use examples in learning to solve problems. *Cognitive Science, 13*(2), 145–182. doi:10.1207/s15516709cog1302_1

Clarke, S., Timperley, H., & Hattie, J. (2003). *Unlocking formative assessment: Practical strategies for enhancing students' learning in the primary and intermediate classroom* (New Zealand edition). Auckland, New Zealand: Hodder Moa Beckett.

Cooper, H. M., & Good, T. (1983), *Pygmalion grows up: Studies in the expectation communication process*. New York, NY: Longman.

Cooper, H. M., & Tom, D. Y. H. (1984). Teacher expectation research: A review with implications for classroom instruction. *The Elementary School Journal, 85*(1), 76–89. doi:10.1086/461393

Cornelius-White, J. (2007). Learner-centred teacher relationships are effective: A meta-analysis. *Review of Educational Research, 77*(1), 113–143. doi:10.3102/003465430298563

Cotton, K. (1988). *Classroom questioning* (School Improvement Research Series). Retrieved from Education Northwest website: http://educationnorthwest.org/sites/default/files/classroom-questioning.pdf

Covington, M. V. (2000). Goal theory, motivation, and school achievement: An integrative review. *Annual Review of Psychology, 51*, 171–200. doi:10.1146/annurev.psych.51.1.171

Craven, R. G., Marsh, H. W., & Debus, R. L. (1991). Effects of internally focused feedback and attributional feedback on enhancement of academic self-concept. *Journal of Educational Psychology, 83*(1), 17–27. doi:10.1037/0022-0663.83.1.17

Cremin, T., & Baker, S. (2010). Exploring teacher-writer identities in the classroom: Conceptualising the struggle. *English Teaching: Practice and Critique, 9*(3), 8–25.

Creswell, J. W. (2008). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: SAGE.

Croninger, R. G., & Valli, L. (2009). Mixing it up about methods. *Educational Researcher, 38*(7), 541–545. doi:10.3102/0013189X09348787

Crooks, T., Flockton, L., & White, J. (2007). *Writing assessment results 2006* (National Education Monitoring Report 41). Dunedin, New Zealand: Educational Assessment Research Unit, University of Otago.

Cutler, L., & Graham, S. (2008). Primary grade writing instruction: A national survey. *Journal of Educational Psychology, 100*(4), 907–919. doi:10.1037/a0012656

Danielson, C. (2007). *Enhancing professional practice : A framework for teaching* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Darling-Hammond, L. (1999). *Teacher quality and student achievement: A review of state policy evidence.* Washington, DC: Centre for the Study of Teaching and Policy.

Darling-Hammond, L., & Youngs, P. (2002). Defining 'highly qualified teachers': What does 'scientifically-based research' actually tell us? *Educational Researcher, 31*(9), 13–25. doi:10.3102/0013189X031009013

Dasu, T., & Johnson, T. (2003). *Exploratory data mining and data cleaning*. Hoboken, NJ: John Wiley and Sons. doi:10.1002/0471448354

De La Paz, S., & Graham, S. (2002). Explicitly teaching strategies, skills and knowledge: Writing instruction in middle school classrooms. *Journal of Educational Psychology, 94*(4), 687–698. doi:10.1037/0022-0663.94.4.687

Dellinger, A. B., & Leech, N. L. (2007). Toward a unified validation framework in mixed methods research. *Journal of Mixed Methods Research, 1*(4), 309–332. doi:10.1177/1558689807306147

Delpit, L. (1995). *Other people's children: Cultural conflict in the classroom*. New York, NY: Longman.

Department for Education (2012). *What is the research evidence on writing?* (Research Report DFE-RR238). Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/183399/DFE-RR238.pdf

DeVellis, R. F. (1991). *Scale development: Theory and application*. Newbury Park, CA: SAGE.

Devore, J. L., & Peck, R. (2005). *Statistics: The exploration and analysis of data*. Belmont, CA: Thomson Brooks/Cole.

Dickman, N. E. (2009). The challenge of asking engaging questions. *Currents in Teaching and Learning, 2*(1), 3–16.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist, 41*(10), 1040–1048. doi:10.1037/0003-066X.41.10.1040

Dyson, A. H. (2002). A Bakhtinian buzz about teacher talk: Discourse matters in 'What difference does difference make?' *English Education, 35*(1), 6–20.

Dyson, A. H., & Freedman, S. W. (2003). Writing. In J. Flood, D. Lapp, J. R. Squire & J. M. Jensen (Eds.), *Handbook of research on teaching the English language arts* (2nd ed., pp. 967–992). Mahwah, NJ: Lawrence Erlbaum Associates.

Earley, P. C, Northcraft, G. B., Lee, C., & Lituchy, T. R. (1990). Impact of process and outcome feedback on the relation of goal setting to task performance. *Academy of Management Journal, 33*(1), 87–105. doi:10.2307/256353

Emig, J. (1983). Non-magical thinking: Presenting writing developmentally in schools. In D. Goswami & M. Butler (Eds.), *The web of meaning* (pp. 132–144). Portsmouth, NH: Heinemann.

Englert, C. S., Raphael, T. E., Anderson, L. M., Anthony, H. M., & Stevens, D. D. (1991). Making strategies and self-talk visible: Writing instruction in regular and special education classrooms. *American Educational Research Journal, 28*(2), 337–372. doi:10.3102/00028312028002337

Erceg-Hurn, D. M., & Mirosevich, V. M. (2008). Modern robust statistical methods: An easy way to maximize the accuracy and power of your research. *American Psychologist, 63*(7), 591–601. doi:10.1037/0003-066X.63.7.591

Farnan, N., & Dahl, K. (2003). Children's writing: Research and practice. In J. Flood, D. Lapp, J. R. Squire, & J. M. Jensen (Eds.), *Handbook of research on teaching the English language arts* (2nd ed., pp. 993–1007). Mahwah, NJ: Lawrence Erlbaum Associates.

Fidalgo, R., Torrance, M., & Garcia, J. (2008). The long-term effects of strategy-focussed writing instruction for grade six students. *Contemporary Educational Psychology, 33*(4), 672–693. doi:10.1016/j.cedpsych.2007.09.001

Flood, J., & Lapp, D. (2000). Teaching writing in urban schools: Cognitive processes, curriculum resources, and the missing links—management and grouping. In R. Indrisano & J. R. Squire (Eds.), *Perspectives on writing: Research, theory and practice* (pp. 233–250). Newark, DE: International Reading Association.

Flower, L. S., & Hayes, J. R. (1981). A cognitive process: Theory of writing. *College Composition and Communication, 32*(4), 365–387. doi:10.2307/356600

Flowers, L. A. (2007). Recommendations for research to improve reading achievement for African American students. *Reading Research Quarterly, 42*(3), 424–428. doi:10.1598/RRQ.42.3.8

Flynn, N. (2007). What do effective teachers of literacy do? Subject knowledge and pedagogical choices for literacy. *Literacy, 41*(3), 137–146. doi:10.1111/j.1467-9345.2007.00452.x

Fredericks, J., Blumenfeld, P. C., & Paris, A. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59–109. doi:10.3102/00346543074001059

Freedman, A. (1993). Show and tell? The role of explicit teaching in the learning of new genres. *Research in the Teaching of English, 27*(3), 222–251.

Galbraith, D., & Rijlaarsdam, G. (1999). Effective strategies for the teaching and learning of writing. *Learning and Instruction, 9*(2), 93–108. doi:10.1016/S0959-4752(98)00039-5

Gambrell, L. B., Malloy, J. A., & Mazzoni, S. A. (2007). Evidence-based best practices for comprehensive literacy instruction. In L. B. Gamrell, L. M. Morrow, & M. Pressley (Eds.), *Best practices in literacy instruction* (pp. 11–29). New York, NY: The Guilford Press.

Garcia, S. B., & Guerra, P. L. (2004). Deconstructing deficit thinking: Working with educators to create more equitable learning environments. *Education and Urban Society, 36*(2), 150–168. doi:10.1177/0013124503261322

Geier, R., Blumenfeld, P., Marx, R., Krajcik, J., Fishman, B., & Soloway, E. (2008). Standardized test outcomes for students engaged in inquiry-based science curriculum in the context of urban reform. *Journal of Research in Science Teaching, 45*(8), 922–939. doi:10.1002/tea.20248

Gibbs, R., & Poskitt, J. (2010). *Student engagement in the middle years of schooling (Years 7–10): A literature review*. Wellington, New Zealand: Ministry of Education.

Gilbert, J., & Graham, S. (2010). Teaching writing to elementary students in grades 4–6: A national survey. *The Elementary School Journal, 110*(4), 1–15. doi:10.1086/651193

Gilmore, A., & Smith, J. K. (2011). *NEMP writing, reading and mathematics report 2010* (National Education Monitoring Report 53). Dunedin, New Zealand: Educational Assessment Research Unit, University of Otago.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago, IL: Aldine.

Glaser, R. (1985). *The nature of expertise*. *An occasional paper (no.107).* Retrieved from ERIC database. (ED 261190)

Glaser, R. (1990). The re-emergence of learning theory within instructional research. *American Psychologist 45*(1), 29–39. doi:10.1037/0003-066X.45.1.29

Glaser, R. (1996). Changing the agency for learning: Acquiring expert performance. In K. A. Ericsson (Ed.), *The road to excellence: The acquisition of expert performance in the arts and sciences, sports and games* (pp. 303–311). Hillsdale, NJ: Lawrence Erlbaum.

Goe, L., Bell, C., & Little, O. (2008). *Approaches to evaluating teacher effectiveness: A research synthesis*. Washington, DC: National Comprehensive Center For Teacher Quality.

Goldring, A., Russell, M., & Cook, A. (2003). The effects of computers on student writing: A meta-analysis of studies from 1992–2002. *Journal of Technology, Learning and Assessment, 2*(1), 1–51.

Good, T. L. (1987). Two decades of research on teacher expectations: Findings and future directions. *Journal of Teacher Education, 38*(4), 32–47. doi:10.1177/002248718703800406

Good, T. L., & Brophy, J. (1997). *Looking in classrooms*. New York, NY: Longman.

Graham, S. (2006). Strategy instruction and the teaching of writing: A meta-analysis. In C. McArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 187–207). New York, NY: Guilford Press.

Graham, S., & Harris, K. R. (1997). Self-regulation and writing: Where do we go from here? *Contemporary Educational Psychology, 22*(1), 102–114. doi:10.1006/ceps.1997.0920

Graham, S., & Harris, K. R. (2003). Students with learning disabilities and the process of writing: A meta-analysis of SRSD studies. In L. Swanson & K. R. Harris (Eds.), *Handbook of research on learning disabilities* (pp. 383–402). New York, NY: Guilford Press.

Graham, S., Harris, K. R., MacArthur, C. A., & Schwartz, S. (1991). Writing and writing instruction for students with learning disabilities: Review of a research program. *Learning Disability Quarterly, 14*(2), 89–114. doi:10.2307/1510517

Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology, 99*(3), 445–476. doi:10.1037/0022-0663.99.3.445

Graves, D. H. (1983). *Writing: Teachers and children at work*. Portsmouth, NH: Heinemann.

Graves, D. H. (1994). *A fresh look at writing*. Portsmouth, NH: Heinemann.

Graves, D. H. (1994). *A fresh look at writing*. Portsmouth, NH: Heinemann.

Grossman, P. L., Greenberg, S., Hammerness, K., Cohen, J., Alsop, C., & Brown, M. (2009, April). *Development of the protocol for Language Arts teaching observation (PLATO).* Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Grossman, P. L., Loeb, S., Cohen, J., & Wyckoff, J. (2013). Measure for measure: The relationship between measures of instructional practice in middle school English Language Arts and teachers' value-added scores. *American Journal of Education, 119*(3), 445–470. doi:10.1086/669901

Guenette, D. (2007). Is feedback pedagogically correct? Research design issues in studies of feedback on writing. *Journal of Second Language Writing, 16*(1), 40–53. doi:10.1016/j.jslw.2007.01.001

Hall, K. (2002). Developing the protocol for a systematic review of literature on effective literacy teachers and their teaching: Research in progress. *Reading: Literacy and Language, 36*(1), 44–47. doi:10.1111/1467-9345.00184

Hall, K., & Harding, A. (2003). *A systematic review of effective literacy teaching in the 4 to 14 age range of mainstream schooling* (Tech. Rep.). Research Evidence in Education Library London Social Science Research Unit, Institute of Education.

Hammerness, K., Darling-Hammond, L., Bransford, J. D., Berliner, D. C., Cochrane-Smith, M., . . . Zeichner, K. (2005). How teachers learn and develop. In L. Darling-Hammond & J. D. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 358–389). San Francisco, CA: Jossey-Bass.

Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*(4), 625–638. doi:10.1111/1467-8624.00301

Hanushek, E. A. (2002). *The long-run importance of school quality* (NBER Working Papers 9071). Cambridge, MA: National Bureau of Economic Research.

Hattie, J. (2003, October). *Teachers make a difference: What is the research evidence?* Paper presented at the Australian Council for Educational. Melbourne, Australia.

Hattie, J., & Timperley, H. S. (2007). The power of feedback. *Review of Educational Research, 27*(1), 81–112. doi:10.3102/003465430298487

Hawthorne, S. (2007). How best to teach writing skills: A review of the research into effective ways of teaching writing. *English in Aotearoa, 62,* 27–35.

Hayes, J. R. (2000). A new framework for understanding cognition and affect in writing. In R. Indrisano & J. R. Squire (Eds.), *Perspectives on writing: Research, theory and practice* (pp. 6–44). Newark, DE: International Reading Association.

Heath, B., Lakshmanan, A., Perlmutter, A., & Davis, L. (2010). Measuring the impact of professional development on science teaching: A review of survey, observation and interview protocols. *International Journal of Research and Method in Education, 33*(10), 3–20. doi:10.1080/17437270902947304

Heath, C., Larrick, R. P., & Wu, G. (1999). Goals as reference points. *Cognitive Psychology, 38*(1), 79–109. doi:10.1006/cogp.1998.0708

Hefflin, B. R. (2002). Learning to develop culturally relevant pedagogy: A lesson about cornrowed lives. *The Urban Review, 34*(3), 231–250. doi:10.1023/A:1020603323594

Hillocks, G. (1984). What works in teaching composition: A meta-analysis of experimental studies. *American Journal of Education, 93*(1), 133–170. doi:10.1086/443789

Hillocks, G. (1986). *Research on written composition: New directions for teaching*. Urbana, IL: National Council of Teachers of English.

Hmelo-Silver, C., Duncan, R., & Chinn, C. (2007). Scaffolding and achievement in problem-based and inquiry learning: A response to Kirschner, Sweller, and Clark (2006). *Educational Psychologist, 42*(2), 99–107. doi:10.1080/00461520701263368

Hoffman, J. V., Sailors, M., Duffy, G. R., & Beretvas, S. N. (2004). The effective elementary classroom literacy environment: Examining the validity of the TEX-IN3 observation system. *Journal of Literacy Research, 36*(3), 303–334. doi:10.1207/s15548430jlr3603_3

Hughes, J., & Kwok, O. M. (2007). Influence of student-teacher and parent-teacher relationships on lower achieving readers' engagement and achievement in the primary grades. *Journal of Educational Psychology, 99*(1), 39–51. doi:10.1037/0022-0663.99.1.39

Huot, B. (2002). *Re-articulating writing*. Logan, UT: Utah State University Press.

Johnston, P. L. (2012). *Opening minds: Using language to change lives*. Portland, OR: Stenhouse Publishers.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher, 33*(7), 14–26. doi:10.3102/0013189X033007014

Joselowsky, F. (2007). Youth engagement, high school reform, and improved learning outcomes: Building systemic approaches for youth engagement. *National Association of Secondary School Principals' Bulletin, 91*(3), 257–276.

Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential and inquiry-based learning. *Educational Psychologist, 41*(2), 75–86. doi:10.1207/s15326985ep4102_1

Kiuhara, S. A., Graham, S., & Hawken, L. S. (2009). Teaching writing to high school students: A national survey. *Journal of Educational Psychology, 101*(1), 136–160. doi:10.1037/a0013097

Kluger, A. N., & DeNisi, A. (1996). The effect of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin, 119*(2), 254–284. doi:10.1037/0033-2909.119.2.254

Knudson, R. E. (1989). Effects of instructional strategies on children's informational writing. *Journal of Educational Research, 83*(2), 91–96.

Knudson, R. E. (1990). A question for writing teachers: How much help is too much? *English Journal, 79*(6), 91–93. doi:10.2307/819056

Konrad, M., Helf, S., & Joseph, L. M. (2011). Evidence-based instruction is not enough: Strategies for increasing instructional efficiency. *Intervention in School and Clinic, 47*(2), 67–74. doi:10.1177/1053451211414192

Langer, J. A. (2001). Beating the odds: Teaching middle and high school students to read and write well. *American Educational Research Journal, 38*(4), 837–880. doi:10.3102/00028312038004837

Latham, G. P., & Locke, E. A. (1991). Self-regulation through goal setting. *Organizational Behavior and Human Decision Processes, 50*(2), 212–247. doi:10.1016/0749-5978(91)90021-K

Lawson, T. (2011). Sustained classroom observation: What does it reveal about changing teaching practices. *Journal of Further and Higher Education, 35*(3), 317–337. doi:10.1080/0309877X.2011.558891

Leech, N. L., Dellinger, A. B., Brannagan, K. B., & Tanaka, H. (2010). Evaluating mixed research studies: A mixed methods approach. *Journal of Mixed Methods Research, 4*(1), 17–31. doi:10.1177/1558689809345262

LeTendre, G. K., Hofer, B. K., & Shimizu, H. (2003). What is tracking? Cultural expectations in the United States, Germany, and Japan. *American Educational Research Journal, 40*(1), 43–89. doi:10.3102/00028312040001043

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverley Hills, CA: SAGE.

Locke, E. A., & Latham, G.P. (1990). A theory of goal setting & task performance. Englewood Cliffs, NJ: Prentice Hall.

Locke, E. A., Latham, G. P., & Erez, M. (1988). The determinants of goal commitment. *Academy of Management Review, 13*(1), 23–39.

Lodewyk, K. R., & Winne, P. H. (2005). Relations among the structure of learning tasks, achievement and changes in self-efficacy in secondary students. *Journal of Educational Psychology, 97*(1), 3–12. doi:10.1037/0022-0663.97.1.3

Lodewyk, K. R., Winne, P. H., & Jamieson-Noel, D. L. (2009). Implications of task structure on self-regulated learning and achievement. *Educational Psychology, 29*(1), 1–25. doi:10.1080/01443410802447023

Lynch, M., & Cicchetti, D. (1997). Children's relationships with adults and peers: An examination of elementary and junior high school students. *Journal of School Psychology, 35*(1), 81–99. doi:10.1016/S0022-4405(96)00031-3

Maehr, M. L. (1984). Meaning and motivation: Toward a theory of personal investment. *Research on Motivation in Education, 1*, 115–144.

Marshall, H. M., & Weinstein, R. S. (1984). Classroom factors affecting students' self-evaluations: An interactional model. *Review of Educational Research, 54*(3), 301–325. doi:10.3102/00346543054003301

Martin, A. (2007). Examining a multi-dimensional model of student motivation and engagement using a construct validation approach. *British Journal of Educational Psychology, 77*(2), 413–440. doi:10.1348/000709906X118036

Marzano, R. J. (1998). *A theory-based meta-analysis of research on instruction*. Aurora, CO: Mid-Continent Regional Educational Lab.

McCarthey, S. (1994). Authors, text and talk: The internalization of dialogue from social interaction during writing. *Reading Research Quarterly, 29*(3), 200–231. doi:10.2307/747871

McNaughton, S. (2002). *Meeting of minds.* Wellington, New Zealand: Learning Media.

Medwell, J., Wray, D., Poulson, L., & Fox, R. (1998). *Effective teachers of literacy*. A report commissioned by the UK Teacher Training Agency. Exeter, England.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: SAGE.

Miller, K., & Satchwell, C. (2006). The effect of beliefs about literacy on teacher and student expectations: A further education perspective. *Journal of Vocational Education and Training, 58*(2), 135–150. doi:10.1080/13636820600799551

Miller, S. (2003). Impact of mixed methods and design on inference quality. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioural research* (pp. 423–455). Thousand Oaks, CA: SAGE.

Milne, C., & Otieno, T. (2007). Understanding engagement: Science demonstrations and emotional energy. *Science Education 91*(4), 523–553. doi:10.1002/sce.20203

Ministry of Education (2006). *In focus: Achievement in eriting*. Wellington, New Zealand: Learning Media.

Ministry of Education (2007). *The New Zealand Curriculum*. Wellington, New Zealand: Learning Media.

Ministry of Education (2009). *Reading and writing standards for Years 1–8*. Wellington, New Zealand: Learning Media.

Ministry of Education (2010). *Literacy learning progressions: Meeting the reading and writing demands of the curriculum.* Wellington, New Zealand: Learning Media.

National Center for Education Statistics (2012). *The nation's report card: Writing 2011* (NCES 2012-470). Institute of Education Sciences, US Department of Education, Washington, DC.

Nelson, M. M., & Schunn, C. D. (2009). The nature of feedback: How different types of peer feedback affect writing performance. *Instructional Science, 37*(4), 375–401. doi:10.1007/s11251-008-9053-x

Newmann, F., & Wehlage, G. (1993). Five standards of authentic instruction. *Educational Leadership, 50*(7), 8–12.

Nicholls, J. D. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice and performance. *Psychological Review, 91*(3), 328–346. doi:10.1037/0033-295X.91.3.328

Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education, 31*(2), 199–218. doi:10.1080/03075070600572090

Nystrand, M. L, Gamoran, A., & Carbonaro, W. (1998). *Towards an ecology of learning: The case of classroom discourse and its effects on writing in high school English and social studies*. A report for the National Research Center on English Learning and Achievement. New York, NY: University of Albany.

Nystrand, M. L, Wu, L., Gamoran, A., Zeiser, S., & Long, D. (2001). *Questions in time: Investigating the structure and dynamics of unfolding classroom discourse*. A report for the National Research Center on English Learning and Achievement. New York, NY: University of Albany.

Palardy, G. J., & Rumberger, R. W. (2008). Teacher effectiveness in first grade: The importance of background qualifications, attitudes and instructional practices for student learning. *Education Evaluation and Policy Analysis, 30*(2), 111–140. doi:10.3102/0162373708317680

Paratore, J. R., & Indrisano, R. (2003). Grouping for instruction in literacy. In J. Flood, D. Lapp, J. R. Squire, & J. M. Jensen (Eds.), *Handbook of research on teaching the English language arts* (pp. 566–572). Mahwah, NJ: Lawrence Erlbaum.

Paratore, J. R., & McCormack, R. L. (2009). Grouping in the middle and secondary grades: Advancing content and literacy knowledge. In K. D. Wood & W. E. Blanton (Eds.), *Literacy instruction for adolescents: Research-based practice* (pp. 420–441). New York, NY: The Guilford Press.

Paris, S. G., & Winograd, P. (n.d.). *The role of self-regulated learning in contextual teaching: Principles and practices for teacher preparation* (CIERA Report). Retrieved from http://www.ciera.org/library/archive/2001-04/0104parwin.htm

Paris, S. G., & Winograd, P. (1990). How metacognition can promote academic learning and instruction. In B. F. Jones & L. Idol (Eds.), *Dimensions of thinking and cognitive instruction* (pp. 15–51). Hillsdale, NJ: Lawrence Erlbaum.

Parr, J. M., & Limbrick, L. (2010). Contextualising practice: Hallmarks of effective teachers of writing. *Teaching and Teacher Education, 26*(3), 583–590. doi:10.1016/j.tate.2009.09.004

Parr, J. M., & Timperley, H. S. (2010). Feedback to writing, assessment for teaching and learning and student progress. *Assessing Writing 15*(2), 68–85. doi:10.1016/j.asw.2010.05.004

Parr, J. M., Timperley, H. S., Reddish, P., Jesson, R., & Adams, R. (2006). *Literacy Professional development project: Identifying effective teaching and professional development practices for enhanced student learning.* Wellington, New Zealand: Ministry of Education.

Parris, S. R., & Block, C. C. (2007). The expertise of adolescent literacy teachers. *Journal of Adolescent & Adult Literacy, 50*(7), 582–596. doi:10.1598/JAAL.50.7.7

Patrick, H., Ryan, A., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environments, motivational beliefs and engagement. *Journal of Educational Psychology, 99*(1), 83–98. doi:10.1037/0022-0663.99.1.83

Patton, M. Q. (1990). *Qualitative research and assessment methods* (2nd ed.). Newbury Park, CA: SAGE.

Perkins, J. H., & Cooter, R. B. (2005). Evidence-based literacy education and the African American child. *The Reading Teacher, 59*(2), 194–198. doi:10.1598/RT.59.2.9

Perry, N. E. (1998). Young children's self-regulated learning and contexts that support it. *Journal of Educational Psychology, 90*(4), 715–729. doi:10.1037/0022-0663.90.4.715

Perry, N. E., & Drummond, L. (2002). Helping young students become self-regulated researchers and writers. *The Reading Teacher, 56*(3), 298–310.

Perry, N. E., Hutchinson, L., & Thauberger, C. (2008). Talking about teaching self-regulated learning: Scaffolding student teachers' development and use of practices that promote self-regulated learning. *International Journal of Educational Research, 47*(2), 97–108. doi:10.1016/j.ijer.2007.11.010

Perry, N. E., Phillips, L., & Dowler, J. (2004). Examining features of tasks and their potential to promote self-regulated learning. *Teachers College Record, 106*(9), 1854–1878. doi:10.1111/j.1467-9620.2004.00408.x

Perry, N. E., & VandeKamp, K. J. O. (2000). Creating classroom contexts that support young children's development of self-regulated learning. *International Journal of Educational Research, 33*(7), 821–843. doi:10.1016/S0883-0355(00)00052-5

Pianta, R. C. (2001). *Student-teacher relationship scale: Professional manual.* Psychological Assessment Resources: Lutz, FL.

Pianta, R. C., & Hamre, B. K. (2009). Conceptualization, measurement and improvement of classroom processes: Standardized observation can leverage capacity. *Educational Researcher, 38*(2), 109–119. doi:10.3102/0013189X09332374

Poulson, L., Avramides, E., Fox, R., Medwell, J., & Wray, D. (2001). The theoretical beliefs of effective teachers of literacy in primary schools: An exploratory study of orientations to reading and writing. *Research Papers in Education, 16*(3), 271–292. doi:10.1080/02671520126827

Pressley, M., Rankin, J., & Yokoi, L. (1995). *A survey of instructional practices of primary teachers nominated as effective in promoting literacy* (Reading Research Report 41 Summer 1995). New York, NY: National Reading Research Centre.

Pressley, M., Raphael, L., Gallagher, J. D., & DiBella, J. (2004). Providence-St. Mel School: How a school that works for African-American students works. *Journal of Educational Psychology*, *96*(2), 216–235. doi:10.1037/0022-0663.96.2.216

Pressley, M., Wharton-McDonald, R., Mistretta-Hampson, J., & Echevarria, M. (1998). Literacy instruction in 10 fourth and fifth grade classrooms in upstate New York. *Scientific Studies of Reading, 2*(2), 159–194. doi:10.1207/s1532799xssr0202_4

Pressley, M., Yokoi, L., Rankin, J., Wharton-McDonald, R., & Mistretta, J. (1997). A survey of the instructional practices of Grade 5 teachers nominated as effective in promoting literacy. *Scientific Studies of Reading, 1*(2), 145–160. doi:10.1207/s1532799xssr0102_3

Purcell-Gates, V., Duke, N. K., & Martineau, J. A. (2007). Learning to read and write genre specific-text: Roles of authentic experience and explicit teaching. *Reading Research Quarterly, 42*(1), 8–45. doi:10.1598/RRQ.42.1.1

Quintana, C., Reiser, B. J., Davis, E. A., Krajcik, J., Fretz, E., Duncan, . . . Soloway, E. (2004). A scaffolding design framework for software to support science inquiry. *The Journal of the Learning Sciences, 13*(3), 337–386. doi:10.1207/s15327809jls1303_4

Rankin-Erickson, J. L., & Pressley, M. (2000). A survey of instructional practices of special education teachers nominated as effective teachers of writing. *Learning Disabilities Research and Practice*, *15*(4), 206–225. doi:10.1207/SLDRP1504_5

Raphael, L. M, Pressley, M., & Mohan, L. (2008). Engaging instruction in middle school classrooms: An observational study of nine teachers. *The Elementary School Journal, 109*(1), 61–81. doi:10.1086/592367

Read, S. (2010). A model for scaffolding writing instruction: IMSCI. *The Reading Teacher, 64*(1), 47–52. doi:10.1598/RT.64.1.5

Regan, K., & Berkeley, S. (2012). Effective reading and writing instruction: A focus on modelling. *Intervention in School and Clinic, 47*(5), 276–282. doi:10.1177/1053451211430117

Reutzel, D. R. (2007). Organizing effective literacy instruction: Differentiating instruction to meet the needs of all children. In L. B. Gambrell, L. M. Morrow, & M. Pressley (Eds.), *Best practices in literacy instruction* (pp. 313–434). New York, NY: The Guilford Press.

Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools and academic achievement. *Econometrica, 73*(2), 417–458. doi:10.1111/j.1468-0262.2005.00584.x

Rohrkemper, M., & Corno, L. (1988). Success and failure on classroom tasks: Adaptive learning and classroom teaching. *Elementary School Journal, 88*(3), 297–312. doi:10.1086/461540

Rosenthal, R., & Rubin, D. (1971). *Pygmalion reconsidered.* Belmont, CA: Wadsworth.

Rowe, K. (2003). The importance of teacher quality as a key determinant of students' experiences and outcomes of schooling. *Proceedings of the Building Teacher Quality: Research Conference 2003, Melbourne, Australia*, 14–23. http://research.acer.edu.au/research_conference_2003/3

Rubie-Davies, C. M. (2010). Teacher expectations and perceptions of student attributes: Is there a relationship? *British Journal of Educational Psychology, 80*(1), 121–135. doi:10.1348/000709909X466334

Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science, 18*(2), 119–144. doi:10.1007/BF00117714

Scardamalia, M., & Bereiter, C. (1986). Written composition. In M. Wittrock (Ed.), *Handbook of research on teaching* (pp. 778–803). New York, NY: Macmillan.

Schacter, J., & Thum, Y. M. (2004). Paying for high- and low-quality teaching. *Economics of Education Review, 23*(4), 411–430. doi:10.1016/j.econedurev.2003.08.002

Schumm, J. S., & Avalos, M. A. (2009). Responsible differentiated instruction for the adolescent learner. In K. D. Wood & W. E. Blanton (Eds.), *Literacy instruction for adolescents: Research-based practice* (pp. 144–169). New York, NY: The Guilford Press.

Schunk, D. H. (1990). Goal setting and self-efficacy during self-regulated learning. *Educational Psychologist, 25*(1), 71–86. doi:10.1207/s15326985ep2501_6

Schunk, D. H. (1995). Self-efficacy and education and instruction. In J. E. Maddux (Ed.), *Self-efficacy, adaptation and adjustment: Theory, research and application* (pp. 281–303). New York, NY: Plenum Press. doi:10.1007/978-1-4419-6868-5_10

Schunk, D. H. (1996). Goal and self-evaluative influences during children's cognitive skill learning. *American Educational Research Journal, 33*(2), 359–382. doi:10.3102/00028312033002359

Schunk, D. H. (2001). *Self-regulation through goal setting*. Retrieved from ERIC database. (ED462671)

Schunk, D. H. (2003). Self-efficacy for reading and writing: Influence of modelling, goal setting and self-evaluation. *Reading and Writing Quarterly, 19*(2), 159–172. doi:10.1080/10573560308219

Schunk, D. H., & Swartz, C. W. (1993). Goals and progress feedback: Effects on self-efficacy and writing achievement. *Contemporary Educational Psychology, 18*(3), 337–354. doi:10.1006/ceps.1993.1024

Schunk, D. H., & Zimmerman, B. J. (2007). Influencing children's self-efficacy and self-regulation of reading and writing through modelling. *Reading and Writing Quarterly, 23*(1), 7–25. doi:10.1080/10573560600837578

Schwartz, D. L., Bransford, J. D., & Sears, D. (2008). Efficiency and innovation in transfer. *Transfer of learning: Research and perspectives*. Greenwich, CT: Information Age Publishing.

Seijts, G. H., Latham, G. P., Tasa, K., & Latham, B. W. (2004). Goal setting and goal orientation: An integration of two different yet related literatures. *Academy of Management Journal, 47*(2), 227–239. doi:10.2307/20159574

Shaffer, J. P. (2006). Estimation. In J. L. Green, G. Camilli & P. B. Elmore (Eds.), *Handbook of complementary methods in educational research* (pp. 259–277). Mahwah, NJ: Lawrence Erlbaum.

Shanahan, T. (2004, November). *How do you raise reading achievement?* Paper presented at the Utah Council of the International Reading Association Meeting, Salt Lake City, UT.

Shavelson, R. J., & Webb, N. M. (2006). Generalizability theory. In J. L. Green, G. Camilli, & P. B. Elmore (Eds.), *Handbook of complementary methods in education research* (pp. 309–322). Mahwah, NJ: Lawrence Erlbaum.

Shiel, G. (2003). Raising standards in reading and writing: Insights from England's National Literacy Strategy. *The Reading Teacher, 56*(7), 692–695.

Shulman, L. S. (1987). Knowledge and learning: Foundations of the new reform. *Harvard Education Review, 57*(1), 1–22.

Smagorinsky, P. (1992). How reading model essays affects writers. In J. W. Irwin & M. A. Doyle (Eds.), *Reading/writing connections: Learning from research* (pp. 160–175). Newark, NJ: International Reading Association.

St. George, A. (1983). Teacher expectations and perceptions of Polynesian and Pakeha pupils and the relationship to classroom behaviour and school achievement. *British Journal of Educational Psychology, 53*(1), 48–59. doi:10.1111/j.2044-8279.1983.tb02535.x

Stolarek, E. A. (1994). Prose modelling and metacognition: The effect of modelling on developing a metacognitive stance toward writing. *Research in the Teaching of English, 28*(2), 154–174.

Strahan, D. (2008). Successful teachers develop academic momentum with reluctant students. *Middle School Journal, 39*(5), 4–12.

Strickland, D. S. (1994). Educating African American learners at risk: Finding a better way. *Language Arts, 71*(5), 328–336.

Stronge, J. H., Ward, T. J., & Grant, L. W. (2011). What makes good teachers good? A cross-case analysis of the connection between teacher effectiveness and student achievement. *Journal of Teacher Education, 62*(4), 339–355. doi:10.1177/0022487111404241

Sullivan, A. S. (2008). *The effects of topic choice and prompts on student writing and student attitudes about writing* (Unpublished doctoral dissertation). University of Massachusetts, Boston, MA.

Sweller, J., Kirschner, P.A., & Clark, R.E. (2007). Why minimally guided teaching techniques do not work: A reply to commentaries. *Educational Psychologist, 42*(2), 115–121. doi:10.1080/00461520701263426

Symes, I., & Timperley, H. S. (2003). Using achievement information to raise student achievement. *SET: Research Information for Teachers, 1*, 36–39.

Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, CA: SAGE.

Taylor, B. M., Pearson, P. D., Peterson, D. S., & Rodriguez, M. C. (2003). Reading growth in high-poverty classrooms: The influence of teacher practices that encourage cognitive engagement in literacy learning. *The Elementary School Journal, 104*(1), 3–28. doi:10.1086/499740

Taylor, B.M., Pressley, M., & Pearson, D. (2000). *Effective teachers and schools: Trends across recent studies* (CIERA Report). Ann Arbor, MI: Center for the Improvement of Early Reading Achievement, University of Michigan.

Taylor, C. (1970). The expectations of Pygmalion's creators. *Educational Leadership, 28*(2), 161–164.

Timperley, H. S., & Parr, J. M. (2009). What is this lesson about? Instructional processes and student understandings in writing classrooms. *The Curriculum Journal, 20*(1), 43–60. doi:10.1080/09585170902763999

Timperley, H. S., & Phillips, G. (2003). Changing and sustaining teachers' expectations through professional development in literacy. *Teaching and Teacher Education, 19*(6), 627–641. doi:10.1016/S0742-051X(03)00058-1

Tomlinson, C. A. (2003). *Fulfilling the promise of the differentiated classroom: Strategies and tools for responsive teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.

Tompkins, G. E., & Tway, E. (2003). The elementary school classroom. In J. Flood, D. Lapp, J. R. Squire, & J. M. Jensen (Eds.) *Handbook of research on teaching the English language arts* (2nd ed., pp. 501–511). Mahwah, NJ: Lawrence Erlbaum Publishers.

Topping, K., & Ferguson, N. (2005). Effective literacy teaching behaviours. *Journal of Research in Reading, 28*(2), 125–143. doi:10.1111/j.1467-9817.2005.00258.x

Trochim, W. M. K., & Donnelly, J. P. (2007). *The research methods knowledge base* (3rd ed.). Mason, OH: Atomic Dog Publishing.

Tsai, Y., Kunter, M., Ludtke, O., Trautwein, U., & Ryan, R. (2008). What makes lessons interesting? The role of situational and individual factors in three school subjects. *Journal of Educational Psychology, 100*(2), 460–472. doi:10.1037/0022-0663.100.2.460

Tubbs, M. E. (1986). Goal setting: A meta-analytic examination of the empirical evidence. *Journal of Applied Psychology, 71*(3), 474–483. doi:10.1037/0021-9010.71.3.474

Tunstall, P., & Gipps, C. (1996). Teacher feedback to young children in formative assessment: A typology. *British Educational Research Journal, 22*(4), 389–404. doi:10.1080/0141192960220402

Turner, J. D. (2005). Orchestrating success for African American readers: The case of an effective third grade teacher. *Reading Research & Instruction, 44*(4), 27–48. doi:10.1080/19388070509558435

Tyler, K., & Boelter, C. (2008). Linking black middle school students' perceptions of teacher expectations to academic engagement and efficacy. *The Negro Education Review, 59*(1–2), 27–44.

University of Auckland (2005a). *asTTle: Assessment tools for teaching and learning (version 4)*. Wellington, New Zealand: University of Auckland/Ministry of Education.

University of Auckland (2005b). *asTTle: Assessment tools for teaching and learning (teachers' manual)*. Available from http://www.tki.org.nz/r/asttle/user-manual_e.php

Vanderburg, R. (2006). Reviewing research on teaching writing based on Vygotsky's theories: What we can learn. *Reading and Writing Quarterly, 22*(4), 375–393. doi:10.1080/10573560500455778

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard, MA: Harvard University Press.

Walker-Dalhouse, D. (2005). No child left behind: Key issues and instructional implications for teachers of African-American children. *Reading Horizons, 45*(3), 155–174.

Wayne, A. J., & Youngs, P. (2003). Teacher characteristics and student achievement gains: A review. *Review of Educational Research, 73*(1), 89–122. doi:10.3102/00346543073001089

Weinstein, R. S. (2002). *Reaching higher: The power of expectations in schooling*. Cambridge, MA: Harvard University Press.

Weinstein, R. S., Marshall, H. H., Brattesani, K. A., & Middlestadt, S. E. (1982). Student perceptions of differential teacher treatment in open and traditional classrooms. *Journal of Educational Psychology, 74*(4), 678–692. doi:10.1037/0022-0663.74.5.678

Weinstein, R. S., & Middlestadt, S. E. (1979). Student perceptions of teacher interactions with male high and low achievers. *Journal of Educational Psychology, 71*(4), 421–431. doi:10.1037/0022-0663.71.4.421

Wentzel, K. R. (1997). Student motivation in middle school: The role of perceived pedagogical caring. *Journal of Educational Psychology, 89*(3), 411–419. doi:10.1037/0022-0663.89.3.411

Wharton-McDonald, R., Pressley, M., & Hampston, J. (1998). Literacy instruction in nine first-grade classrooms: Teacher characteristics and student achievement. *Elementary School Journal, 99*(2), 101–128. doi:10.1086/461918

Wigfield, A., & Eccles, J. S. (1992). The development of achievement task values: A theoretical analysis. *Developmental Review, 12*(3), 265–310. doi:10.1016/0273-2297(92)90011-P

Wiggins, G., & McTighe, J. (2001). *Understanding by design*. Upper Saddle River, NJ: Prentice Hall.

Wilkinson, I. A. G., & Son, E. H. (2010). A dialogic turn in research on teaching and learning to comprehend. In M. L. Kamil, P. D. Pearson, E. B. Moje, & P. Afflerbach (Eds.), *Handbook of reading research* (Vol. IV, pp. 359–387). New York, NY: Routledge.

Wilkinson, I. A. G., & Townsend, M. A. R. (2000). From Rata to Rimu: Grouping for instruction in best practice New Zealand classrooms. *The Reading Teacher, 53*(6), 460–471.

Williams, J. M., & Colomb, G. G. (1993). The case for explicit teaching: Why what you don't know won't help you. *Research in the Teaching of English, 27*(3), 252–264.

Willis, A. I. (2009). Edu*Poli*tical research: Reading between the lines. *Educational Researcher, 38*(7), 528–536. doi:10.3102/0013189X09347584

Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry, 17*(2), 89–100. doi:10.1111/j.1469-7610.1976.tb00381.x

Worthy, J., Hungerford-Kresser, H., & Hampton, A. (2009). Tracking and ability grouping. In L. Christenbury, R. Bomer, & P. Smagorinsky (Eds.), *Handbook of adolescent literacy research* (pp. 220–236). NY: The Guilford Press.

Yarrow, F., & Topping, K. (2001). Collaborative writing: The effects of metacognitive prompting and structured peer interaction. *British Journal of Educational Psychology, 71*(2), 261–282. doi:10.1348/000709901158514

Yorke, M. (2003). Formative assessment in higher education: Moves towards theory and the enhancement of pedagogical practice. *Studies in Higher Education, 45*(4), 477–501. doi:10.1023/A:1023967026413

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist, 25*(1), 3–17. doi:10.1207/s15326985ep2501_2

Zimmerman, B. J., & Risemberg, R. (1997). Caveats and recommendations about self-regulation of writing: A social cognitive rejoinder. *Contemporary Educational Psychology*, *22*(1), 115–122. doi:10.1006/ceps.1997.0921