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Intertextuality as a conceptual tool for the
teaching of writing: Designing professional
development that will transfer

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Intertextuality as a Conceptual Tool for the Teaching of Writing: Designing Professional Development that will Transfer

Abstract

Professional development of teachers in writing should lead to quality writing programmes in schools, resulting in accelerated student progress across a variety of communicative purposes for writing (genre). However, interventions commonly assess students in a single writing purpose at the beginning and end of each year. The aim of this study was to design professional development that would raise achievement for students across a variety of purposes for writing. To this end, two differing professional development interventions were designed in which teachers explicitly investigated relationships among written texts using theories of intertextuality.

This mixed-methods intervention study employed a quasi-experimental design, which collected student achievement and classroom observation data to assess the relative effectiveness of the two professional development programmes in writing instruction in six schools in Auckland. While both programmes focused on the intertextual nature of writing, the first looked at a specific purpose for writing; the second offered a broader writing focus by comparing and contrasting texts written for differing purposes. To illuminate how teachers' participation in each of these professional development types influenced classroom programmes, two teachers from each were observed in depth as case-studies.

Student assessment information was analysed from schools in each of the groups to ascertain the relative effectiveness of each professional development type in

accelerating student achievement in a targeted writing purpose and also in other purposes for writing. Repeated measures ANOVAs show differences in the achievement gains between the students of the two groups, not in the targeted purpose but in other purposes for writing. Classroom observations and case study results indicated that teachers in both professional development groups used intertextual links as a basis for their classroom programmes in similar ways. Thus, it is hypothesised that the difference in student achievement patterns between the two groups may be the result of differences in the depth of teacher learning provided by the professional development.

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Chapter One: Introduction

1.1 'Writing' is a Problem to be Solved

Internationally, students underperform on measures of writing. In the United States, the National Commission on Writing (2003) identified writing as the 'neglected R' provoking efforts across the United States to raise writing achievement generally as well as reduce disparities in achievement. Since that time, NAEP scores in 2007 indicate some positive results of the emphasis to improve the teaching of writing, yet continued underachievement (Salahu-Din, Persky, & Miller, 2008). In England, whereas 83% of children had reached criterion levels in reading in 2005, only 48% of children had reached criterion levels in writing (Montgomery, 2008). In New Zealand, similarly, achievement in writing in schools is lower than achievement in reading when considered in terms of curriculum expectations. In general, students' level of achievement in writing is one whole curriculum level (approximately two years) below that of their achievement in reading or maths. Moreover, nation-wide data indicate that large numbers of secondary school students write no better than many primary school students, with average achievement in Year 11 and 12 reaching only curriculum Level 4 (the expected level at Year 8) (Ministry of Education, 2006b).

In this country there is an additional need to address achievement issues for students from Maori and Pacific Islands (Pasifika) backgrounds. International studies of achievement show that in general New Zealand's spread of attainment is very wide, and that persistent disparities in outcomes exist for these Maori and Pasifika students, who are twice less likely to reach the lowest benchmark of performance (Comparative Education Research Unit, 2004). National research shows that both Maori and

Pasifika students are still achieving at substantially lower levels at both Year 4 and Year 8 (Flockton, Crooks, & White, 2006).

To address this concern for achievement, quality instruction is required, which in turn necessitates quality teacher professional development (Darling-Hammond & Bransford, 2005). Student achievement outcomes, therefore, were the goal of the teacher professional development in this intervention study, as advocated by Timperley (2003).

The concern to raise achievement in writing also needs to address issues of transfer. While there are current studies that attend to student achievement in writing, longitudinal results from these indicate a dip in achievement between the end of the first year's achievement and the beginning of the second (McNaughton & Lai, 2008; Parr, Timperley, Reddish, Jesson, & Adams, 2006). Thus, while gains are made within a year, these gains are often not maintained across the summer break, which, in turn, impacts on students' potential trajectory of learning. There are two possible explanations for these findings. The first is the summer effect on student learning. The second is the change in the assessed purpose for writing in the second year.

Summer effects are known internationally in reading and mathematics (Borman & Dowling, 2006; Borman, Goetz, & Dowling, 2009) and in New Zealand (Lai, McNaughton, Amituanai-Tolosa, Turner, & Hsiao, 2009). Such studies indicate that students from low socio-economic status (SES) backgrounds are disproportionately affected by lack of schooling over summer school breaks. In particular, where middle class children make slight gains in reading over summer, the achievement of low-SES children either plateaus or falls back. The reported dip in

achievement in writing interventions may be evidence to suggest that the summer learning effect exists for writing as well as reading and mathematics.

An alternative explanation, however, is that the dip reflects a change in the communicative purpose for writing being assessed. (In New Zealand, writing ‘purpose’ is the term used to describe what authors are attempting to ‘do’ as writers, such as ‘to narrate’, or ‘to persuade’. The term ‘writing purpose’ reflects socio-cultural understandings about the role of texts as artefacts designed to achieve social purposes). Typically, in current interventions, the same communicative purpose for writing is assessed at the beginning and end of each year to give comparable pre-post measures. The professional development that teachers undertake over the course of that year commonly addresses the reliable marking of this particular writing purpose and professional development in writing (McNaughton & Lai, 2008; Parr, et al., 2006). In the second year of the intervention the assessment focus, in terms of writing purpose, may change, potentially resulting in a drop in initial achievement scores in that second year. Thus the alternative explanation for the drop off in scores between subsequent years of an intervention is one of transfer, in that achievement gains made in the first year in one purpose for writing do not transfer to other writing purposes.

However, effective instruction needs to develop student expertise across different purposes for writing. To accept achievement gains in only a single purpose for writing would be to accept a narrowing of the curriculum in order to achieve those gains. Thus, the challenge tackled in this study was to design professional development that resulted in durable achievement gains in more than one purpose for writing.

Studies of writers show that learners have difficulty transferring skills developed in one domain to another (Tardy, 2006). Moreover, empirical evidence indicates that it is not possible to predict students' scores from one type of writing to another (see Berge, 2002). Theoretically, this apparent lack of transfer resonates with socio-cultural theories of genre which argue that genres are tools to achieve social purposes (Kamberelis, 1999; Kamberelis & Bovino, 1999; Kress, 1999). Hence there is an argument for specificity in that there may be no such thing as a single 'literacy' which students can acquire (Hyland, 2002). Instead, it is contended that genres are the result of different 'discourse communities' of writers interacting in rhetorically differing ways, depending on culturally and historically evolving discourses. Therefore facility and familiarity with writing in one genre is by no means sufficient to write in another, as this will be part of a different social activity. Such specificity, in terms of teaching of writing, means that writing purposes are described as discrete in many teaching resources (e.g., Learning Media, 2006) and assessment tools (e.g., University of Auckland, 2005b), as students are learning to write for differing purposes. As a result it also means that the content knowledge required of teachers will need to encapsulate various writing purposes. In terms of the teaching process, however, specific types of teaching for differing purposes have not yet been advocated.

At the student level, there is some empirical support to show that differences in tasks and contexts do constrain transfer of learning in writing. In writing assessments of students, individuals perform with varying success on particular writing tasks as well as across different purposes for writing (Chen, Niemi, Wang, Wang, & Mirocha, 2007). Studies of second language learners in general writing courses also show that commonly they do not apply learning from one course to

another (Tardy, 2006). However, studies have found that transfer of writing for learners is possible, but is affected by a number of constraints, including the students' perceptions of similarity between writing tasks (James, 2008). Chapter Two of this study reviews the literature associated with transfer, particularly as it pertains to designing professional development in writing instruction that will transfer across writing purposes.

As the learners involved in the present study were teachers, the focus for the learning was the pedagogical content knowledge (Shulman, 1986) required to teach writing which, theoretically, is knowledge beyond that necessary to write (Parr, 2009). Chapter Three argues that a focus on developing teachers' pedagogical content knowledge has the potential to raise student achievement. Furthermore, a potentially powerful lens for developing generalisable pedagogical content knowledge in writing is the research and theories which focus on intertextuality – the links between texts. Moreover, it is argued that, theoretically, the type of intertextual links made may have possible implications for transfer of, in this case, teachers' learning. Therefore two professional development types were designed. The first focused on genre-specific intertextual links; the second on differences and similarities across genre. The research question was therefore, 'what were the differential effects of these two professional development types on the achievement of students in both a focus genre, and in other writing purposes?'

In order to illuminate the way that the two professional development types had potentially differential impacts on student learning, additional data on teachers' instruction in their classrooms were gathered in two ways. Classroom observations of participating teachers were conducted to provide general evidence about the types of

intertextual links that teachers made as part of writing instruction. To provide detail, two teachers from each professional development group were also observed as case studies of writing instruction based on the professional development. A second research question therefore asks, “How might classroom programmes reflect theories of intertextuality?”

Chapter Four sets out the methods for collecting student achievement data, the classroom observations and the case studies, and describes the participants and the instruments used as well as the details of the two interventions. In Chapter Five the findings of the students’ achievement results and the classroom observations are described. Chapter Six describes the case study teachers and offers a rich description of the intertextual teaching that occurred in those classes. In Chapter Seven the results are discussed in terms of their implication for professional development, assessment and instruction. Results of this study are offered as initial evidence of ways that it is potentially possible to design professional development for teachers which can result in classroom programmes that will accelerate learning for students in more than one writing purpose.

Chapter Two: Applying Theories of Transfer to Professional Development in the Teaching of Writing

In considering whether it is possible to design professional development in writing instruction that will result in student achievement gains in more than one writing purpose it is necessary to consider the implications of issues relating to transfer. In particular, the question at hand regards the optimal conditions for teachers to transfer their learning in ways that will result in instruction which, in turn, results in achievement patterns which are at once 'wide' (more than one writing purpose) yet accelerated (greater than average gains) and durable (providing achievement levels that are, at least, maintained in following years). The historically long and extensive research which pertains to the issue of transfer provides a conceptual and empirical basis from which to develop some initial hypotheses about transfer of professional development across writing purposes. To this end, the following section reviews this literature and discusses the implication of theories of transfer for professional development in writing.

2.1 What is Transfer, Why is Transfer Important and Can It be Taught?

Learners need to be able to apply what they learn in a particular situation to new situations. This is commonly called 'transfer' of learning. Almost without exception, articles and reports which consider transfer begin with a statement that frames it as being one of the major concerns of classroom teachers and researchers of cognition, learning and education generally. The question at hand for educators is building knowledge which can be applied flexibly to different tasks, in different settings, at a different time. Indeed, there seems to be little point in teaching skills and knowledge and fostering dispositions if students do not apply these to new experiences. In essence, transfer is about cognition and

learning, how people apply their existing knowledge in new situations, and how people link or relate their learning. “Transfer of learning provides the most useful vehicle for explaining how we think” (Haskell, 2001, p. xix).

Schooling itself is predicated on an assumption of transfer: that students will learn knowledge skills and attitudes that they can apply in later life, presumably in activities and contexts outside of school. Equally, professional development and other training activities are also predicated on the assumption that they will be directly applicable back in the working context. For educators the concern is to “provide learning experiences that are useful beyond the specific conditions of initial learning” (Lobato, 2006, p. 431). There is debate over how best to do this. Such debate focuses around questions underlying the definition of transfer and the mechanisms which promote it. Researchers differ as to whether and to what extent transfer is a learned skill, a disposition of the learner, a feature of the depth of learning, a social construct, or an interaction with the environment.

Transfer is notoriously difficult to prove in experimental situations, despite the fact that all theories of learning rely on the notions of generalisation, abstraction and concept development. This contradiction is commonly described as the ‘transfer paradox’ (Haskell, 2001, p. 10). Why this paradox exists is the topic of much ongoing speculation: possibly the lack of provable transfer means that understandings do not typically move between contexts, or the experiments are flawed either in some aspect of their conceptualisation of transfer, or in some aspect of their methodology. The first conclusion is troublesome, as well as counter-intuitive. If learners do not typically apply current understandings to novel situations, how then do people cope with novel situations and create new knowledge?, which apparently they do all the time, “All learning is transfer of learning, in the sense that no two situations are ever identical” (Haskell, 2001, p. 24).

Therefore, despite empirical evidence that transfer often does not occur, theory suggests that it does, or must. So researchers persist in the quest to identify transfer of learning and explain its mechanisms.

Despite the troublesome reputation, there are numerous studies which do claim to have achieved some degree of transfer. And for each of these there are critiques, often of the type of transfer achieved by the study, the conception of transfer inherent in it or the methodology used to achieve it. Initial studies of transfer were conducted by psychologists who focused on individuals. These cognitive studies provide the foundation for the 20th Century debates on generalisability versus specificity of knowledge. More recently, issues of transfer and generalisability of learning have been investigated by theorists from a variety of perspectives, including socio-cultural and ‘situated’ theories of learning. As such it is increasingly difficult to talk of a common construct called ‘transfer’, as each of these bodies of literature has a different conception and level of analysis. The following section reviews the history of transfer from these beginnings in psychology and traces the debates to the current day, including the critiques based on situated and socio-cultural theories of learning. The second seeks to synthesise the literature, and draw conclusions that are useful for instruction and, in particular, for professional development in the teaching of writing.

2.2 The 20th Century Transfer Debate: Specificity or Generalisability of Knowledge

Prior to the 20th Century, models of western schooling sought to educate based on the “doctrine of formal discipline” (Barnett & Ceci, 2002; Haskell, 2001; Tuomi-Gröhn & Engeström, 2003b). According to this conception, the mind is conceived of as having general abilities, such as concentration, memory and reasoning. Intelligence and mental ability are conceptualised as similar to physical abilities, that is, with practise and

exercise the mental faculties will grow stronger. As a result, students were given exercises, such as memorising sequences of numbers or learning Latin, in order to improve their general intellectual skills. This conception of the mind will sound familiar to those who have had to memorise long lists of figures or recite epic poems by rote as exercises in memorisation and discipline at school.

At the beginning of the century, Edward Thorndike (Thorndike & Woodworth, 1901) began to publish the results of his studies which showed that the doctrine of formal discipline did not hold up to empirical investigation. Thorndike's experiments showed no evidence of transfer across tasks requiring similar operations (Thorndike & Woodworth, 1901). This led him to develop the notion that the mind works at a level of great detail, and that mental functioning is dependent on the details of particular cases. This is commonly cited as the 'identical elements' model of transfer, "The mind is ... a machine for making particular reactions to particular situations" (Thorndike & Woodworth, 1901, p. 249). Within this conception, transfer of learning will occur to the extent that situations share common elements, which has been commonly interpreted as similarity of 'surface features' (A. L. Brown & Kane, 1988). Thorndike concluded that therefore it was necessary to teach specifically for each situation, and not to depend on transfer.

This view was challenged by Charles Judd (1908, cited in Carraher & Schliemann, 2002; Judd, 1939). In his opinion, transfer need not rely on the specific elements of a situation but the underlying general principles, which are organised by 'higher' mental processes, "The lowest types of experience are those which are more or less directly imposed on the mind by the outer world. The higher forms of experience are those which the mind develops through comparison, analysis and abstraction" (Judd, 1939, p. 412). These mental processes, said Judd, are a feature of the learner, rather than inherent in the

situation, “Effectiveness of instruction and learning depends on the psychological processes that go on in the minds of individual learners and these differ radically under conditions which seem externally to be similar” (p. 505). He proposed that learners developed abstract mental processes, and systems of ideas which could be carried over from one situation to another. In direct opposition to Thorndike, Judd advocated that transfer is something that schools should actively teach, “The chief function of the educational system is to cultivate to their fullest possible limits the unique human functions of attention, analysis, abstraction and generalization” (p. 259).

Thus began the debate over context-specific or generalisable skills (e.g. Perkins & Salomon, 1989). Thorndike’s views are commonly cited as the forerunner of behaviourism, which has led to specific measurable objectives in education and to pedagogies based on repetition and practice of tasks with similar surface features (e.g. addition sums). Judd’s work is seen to lead into the “cognitivist paradigm” (Marton, 2006) and as a predecessor of later views of Jerome Bruner who also emphasises structures and principles (Tuomi-Gröhn & Engeström, 2003a).

2.3 Cognitive Models

Since the focus on generalised thinking and structure articulated by Judd, researchers from the cognitive tradition have continued to investigate transfer and its mechanisms. Most commonly, studies have investigated ‘analogical reasoning’, or individuals’ use of perceptions of similarity to reason inductively or metaphorically. In studies of analogical transfer, participants are given training on one task which is then followed by another task deemed analogical. Transfer is said to occur when participants solve the ‘transfer task’ using the initial ‘training task’ as an analogy. For example, Gick and Holyoak (1983) investigated the ways that ‘prior analogs’, in this case stories involving problems having

analogous solutions, facilitated transfer. In their analysis, analogical reasoning occurs when a solution is found by ‘mapping’ parts of situations which have similar structures. They postulate that people may obtain a solution directly from an analogue by ‘mapping’ the two situations directly. Alternatively, it may be done by mapping the analogue onto an independent schema which has been constructed based on previous such ‘mappings’. Schemas are seen as advantageous in that they should be easier to apply because the work involved in mapping has been previously done, so the relevant aspects of a situation are already apparent to the learner. To investigate this, Gick and Holyoak gave participants two analogous stories, and asked them for an explicit statement of the similarities between them, a task that theoretically induced the mapping necessary to invoke a schema. Participants’ schemas were assessed as to how closely they mapped the optimal solutions for the transfer problem. They found that “the better the schema, the more successful was transfer performance” (Gick & Holyoak, 1983, p. 23).

From this cognitive point of view then, schemas are formed through induction from a number of instances. Experts in particular knowledge domains are notable in that their knowledge is organised more abstractly and deeper structures are therefore more recognisable. Schemas are considered to provide the structure for long term memory (Low, Jin, & Sweller, 2008) and result in ‘chunks’ of knowledge, allowing experts to think in larger units, giving them more conceptual power (Perkins and Salomon, 1989). In contrast, novices may fail to see relevant patterns, or get side-tracked by irrelevant information; the surface or specific features of situations.

Similarly, transfer has potential benefits for the interaction of concept development and memory. For example, Haskell (2001) claims that if students can see how concepts from different domains are essentially similar, then they can ‘chunk’ them

into one concept “and ease the load on memory” (p. 34). Such chunking also assists in memory retrieval and widens what is retrieved, in that the parts of the chunks are associated with each other, and so are retrieved together. Widening the conception of transfer to metaphorical reasoning, Haskell claims that the concepts become reinforcing for each other and, because they are not identical, certain parts of one may reveal aspects of the other that were not previously known.

A necessary condition for applying schema theories to children was supplied by Brown (A. L. Brown & Kane, 1988; A. L. Brown, Kane, & Long, 1989) who showed that even very young children could transfer knowledge of principles (such as animal defence mechanisms) when they understood at a causal level, rather than when they were replicating behaviours. In addition, she found that, like adults, children needed knowledge of a particular domain in order to transfer learned causal schemas successfully. In this regard, children’s cognition is similar to that of adults and not, as previously thought, bound by developmental stages. Theoretically, the difference between adult and child reasoning ability lies in the amount of knowledge within a particular domain available to the young learner.

In the classical analogical transfer experiments such as these described, participants or students must firstly master an initial learning situation (discussed as initial learning), secondly they must generate some abstract principles about the problem (through structure/ schema/ categories) and, finally, they must see the relationships between the initial learning task and the transfer task (cueing). This experimental design has been termed the ‘ABC’ transfer paradigm (A. L. Brown & Kane, 1988). Many educational interventions based on cognitive theories have addressed the first two parts of the process, helping learners develop initial learning situations into broad and flexible

schemas (e.g., Bereiter, 1995; Fuchs et al., 2003; Halford & Busby, 2007; Reznitskaya, Anderson, & Kuo, 2007; Robins & Mayer, 1993). Typically researchers are interested in varying the type and similarity of examples in order to help learners develop schemas which are most useful for transfer.

In the work of Gick and Holyoak (1983), invocation of the appropriate schema was largely dependent on whether participants were cued to use the analogy by the researcher. Brown & Kane (1989) considered that this had ecological validity because analogies are used explicitly in classrooms as teaching and learning examples. However, tackling the issue of learners identifying cues for transfer independently, a further line of research in the cognitive tradition in education has focused on the issues of metacognition. Broadly described, such educational interventions focus specifically on teaching students to monitor, regulate and orchestrate their independent use of taught cognitive strategies. Notable examples of this approach include Reciprocal Teaching (Palinscar & Brown, 1984), critical thinking and thinking skills programmes (e.g. Fisher, 1998; Halpern, 1998) and strategy instruction in writing (e.g. Graham & Harris, 1998; K. R. Harris, Graham, & Mason, 2006).

An additional important metacognitive factor in the study of transfer has been the issue of learners' goals. Bereiter (1995) discusses students' intentional learning, and postulates three types of goals which students may have for their learning. The shortest term goals are task goals, which are based on the same, or next, day and are focused on completing certain tasks or activities (for example, doing the addition sums, or writing the story). The next level of goal is the instructional goal which is associated with achieving the standard for the instruction (passing an exam, for example). The longest term type of goal is the knowledge-building goal which pertains to the learner's personal agenda for

constructing knowledge. In considering transfer of learning, Bereiter concludes that is not surprising that school-based tasks do not produce transfer because the goals are short term and easy to achieve,

“The tasks are usually defined in such a ways as not to put undue strain on the capacities of those performing them. There usually are time constraints, however, and so there is motivation to find ways of satisfying task requirements that economise on time. ... Students or workers are not expected to look beyond the immediate day’s task. ... Given these characteristics of schoolwork, it then becomes remarkable that some children would take it upon themselves to try and discover a logical connection between the concrete and symbolic components of the task they were assigned to carry out” (p 289).

The implication here is that long-term, knowledge goals are those that foster dispositions which encourage transfer in learners.

2.4 Critiques of the Transfer Experiment: Definition and Methodology

Despite the number of studies focusing on transfer, it is notoriously hard to achieve in experimental situations such as these discussed. It would seem, after a century of experiments training participants for transfer, that it does not always work reliably and that, while some studies claim to have success, others have limited success, “the case for generalizable, context-independent skills and strategies that can be trained in one context and transferred to other domains has proven to be more a matter of wishful thinking than hard empirical fact” (Perkins & Salomon, 1989, p. 19). There is some disagreement in the literature, firstly in regard to the extent of the failure and, secondly, as to why this failure may be (Barnett & Ceci, 2002; Lobato, 2006; Salomon & Perkins, 1989; Tuomi-Gröhn &

Engeström, 2003a). Indeed, some commentators have advocated giving up on hopes of teaching for transfer because of the lack of empirical support (Detterman, 1993) or abandoning the construct altogether as inappropriate in light of modern conceptions of learning (Carragher & Schliemann, 2002). Others take a more moderate approach, focusing on what we do know about transfer and seeking to address the methodological issues inherent in past studies.

Fuchs and colleagues (Fuchs, et al., 2003) identify three ‘transfer-inducing’ variables, which derive from the previously outlined ABC transfer paradigm. The first of these variables is the quality of learning in the initial learning situation; the second is that students must develop strategies for sorting (schema) and the third is that they must be aware that novel problems relate. Because of this commonly used design it is often unclear whether failure to achieve transfer in some studies is a methodological issue related to one or more than one of the identified variables of the experimental process. Methodological critiques of transfer studies tend to focus on the first and third parts of the classical transfer study. Some commentators have questioned, for instance, whether in classical transfer studies participants have really had enough time learning to understand the initial problem properly (Lobato, 2006). Perhaps the failure of some transfer experiments is due to the fact that participants did not understand the initial task at this deep level, despite being able to correctly ‘solve’ it. As an analogy, Greeno (1997) appropriates Searle’s (1980) parable of the Chinese room to describe types of (mathematics) learning that are not generalisable due to insufficient depth of learning:

“In that parable, a person lives inside a room that has baskets of tokens of Chinese characters. The person does not know Chinese. However, the person does have a book of rules for transforming strings of Chinese characters into other Chinese

characters. People on the outside write sentences in Chinese on paper and pass them into the room. The person inside the room consults the book of rules and sends back strings of characters that are different from the ones that were passed in. The people on the outside understand it as an answer, and because the rules are cleverly written, the answers are usually correct. By following the rules, the person in the room produces expressions that other people can interpret as the answers to questions that they wrote and passed into the room. But the person in the room does not understand the meaning of either the questions or the answers” (p. 14).

This methodological critique of the A section of ABC transfer paradigm, that the initial learning task does not provide depth of learning, is supported by evidence which suggests that experts are indeed more adept at transfer than are novices (Haskell, 2001). The difference between an expert and a novice is essentially the amount of initial or prior learning available to participants. Such evidence has led to advice to educators to aim to teach children understanding at a deep level (Bereiter, 1995).

At the ‘C’ end of the transfer experiment, the issue of prompting has caused concern. As discussed, findings of transfer are greatly decreased without the hint that the two situations are linked. Commenting on these studies of analogical transfer, Detterman (1993) argued that if participants needed to be prompted to use the analogues, then this does not constitute transfer, particularly as these hints are not likely to be provided in experimenter-free contexts (although they are more likely in educational settings, as Brown and Kane noted).

Further critiques of transfer experiments centre on issues of definition, and whether the transfer claimed in many experiments is anything beyond trivial. Barnett and

Ceci (2002) argue that many studies claiming to have achieved transfer have not achieved anything which is educationally significant, “If transfer is the standard used to justify the human and financial investments in education and training programmes, then it must apply well beyond the environment of training – that is, far transfer is required. Finding evidence of transfer from today’s maths class to tomorrow’s maths class is not sufficient” (Barnett & Ceci, 2002, p. 619). However, a common understanding of what might be sufficient is not yet apparent. If no two situations are ever exactly identical, all learning is in some sense transfer of learning. However, there seems to be an expectation that ‘transfer’ of learning (which involves a metaphor of movement) refers to situations that are intuitively ‘different’ from each other. The obvious question of definition arises: at what point does plain ‘learning’ become ‘transfer’ of learning?

Various researchers have therefore sought a common understanding of what constitutes transfer and in this quest have identified types of transfer which are then comparable. These categorisations of transfer often try to capture the idea of distance inherent in the transportation metaphor. As an example, Perkins and Salomon (1989), distinguish two ‘types’ of transfer, ‘near’ and ‘far’ (which can be traced back to Thorndike and Judd, respectively). The mechanisms that support these, they argue, are different. Far transfer is facilitated by high road transfer mechanisms, “deliberate mindful abstraction of a principle” (p 22); near transfer, on the other hand, can be facilitated by practising skills to automaticity. This duality of transfer types and transfer mechanisms, they suggest, is the essence of the confusion around a common understanding and also the failure of many experiments designed to facilitate transfer “Unfortunately, in many real world situations and many laboratory experiments on transfer, there is nothing to provoke the active de-contextualisation of knowledge, so high road mechanism does not operate” (Perkins & Salomon, 1989, p. 22).

A more comprehensive taxonomy of transfer is suggested by Barnett and Ceci (2002). They argue that the reason that studies cannot be compared is that they do not have a common definition or even conception of what the notion of transfer encompasses, “Our thesis is that the disagreement among proponents and critics is the result of a lack of structure in the transfer debate and a failure to specify the various dimensions that may be relevant to determining whether and when transfer occurs” (Barnett & Ceci, 2002, p. 614). They propose that, in order to compare studies of transfer, there needs to be a mechanism for doing so. They therefore highlight a number of dimensions along which transfer can occur, in terms of what is transferred (for example whether it be a learned skill or more general principle) and the contexts for transfer (for example knowledge domain, temporal context, physical context). Using this framework, they suggest, would offer some basis for deciding which studies of transfer are indeed successful, by determining ‘how far’ along a particular dimension participants are able to show transfer.

2.5 The ‘Situativity’ Critique

More damning to the transfer construct than issues of methodology and definition is the critique of transfer by theorists of situated learning or, more broadly defined, ‘situativity’ (Greeno, 1997). These theorists question whether transfer is even an appropriate construct to describe learning at all. As a construct that focuses on individuals, transfer belongs within a cognitivist understanding of learning. Within this conception, the individual acquires knowledge which can be abstracted and then applied to new tasks or activities. The work of theorists from a situated perspective questions these basic assumptions, particularly the metaphor of knowledge as an abstract, transportable object which is inherent in transfer and individual cognitive structures as the unit of analysis.

In contrast to the transportation metaphor of the cognitive tradition, the main metaphor for learning from a situated learning perspective is one of activity (Cobb & Bowers, 1999). Cognition is conceived of as an activity, not as an object. Within these theories, therefore, knowledge does not 'sit' in heads, but is a process of doing, in the same way that people cannot 'transport' the act of running, but create it anew each time they need it. In this way, learning involves construction and reconstruction of knowledge rather than acquisition.

Seminal in this area, Lave (1988) argued that what we call cognition is, in fact, a complex social phenomenon and that experiments in themselves are not context free but socially and culturally constructed. She criticised the separation of cognition from the social world and contextual variation. Learning is bound up in the situations in which it occurs, thus it cannot be 'transported' from context to context. Analyses from a situated perspective look at the social and environmental factors that are part of any activity: the roles, rights, expectations, goals, motivations, patterns of participation, positioning and framing of interactions and activities as well as the tools and resources available.

Beach (1999) also criticised this metaphor of 'transportation' of knowledge which, he regards, is still influential in that schools are designed with the assumption that knowledge is transportable from one situation to another. What is learned in one class needs to transfer to other classes and to an "indeterminate set of future activities located in families, communities, and workplaces" (p 104). As a 'socio-cultural' theorist, Beach also criticises the dualism of 'mental' and 'external' inherent in the transfer process and the way in which environments are not a part of the process, but are seen to either support or interfere with transfer. In contrast, Beach argues that all learning is socio-cultural. Like others, he seeks to leave behind notions of transfer and consider the phenomenon as

generalisation, which he defines as “the continuity and transformation of knowledge, skill and identity across various forms of social organization” (K. Beach, 1999, p. 112). As such, generalisation may be multiple, interrelated processes, not a single procedure.

Further critiques from a situated perspective criticise the experimenter bias prevalent in experimental transfer studies (Lobato, 2006). The traditional ‘ABC’ transfer experiment assesses learners’ ability to ‘get it right’ in the transfer situation, that is, that they apply the knowledge ‘learned’ in the teaching situation in the ways that the researcher expects in the transfer situation (recall Gick and Holyoake’s (1983) finding that “the better the schema, the more successful was transfer performance”(p.23)). In such studies the researcher takes a stance as the definer of ways of using knowledge ‘correctly’. Instances where students failed to get it right in the transfer situation are seen as failings, where transfer did not occur. However, these tasks are often problem solving tasks, which presumably the participants attempted to some degree to solve. In order to attempt the problem, participants would have used prior knowledge of something. Such studies do not tease out what knowledge was drawn upon and what factors led participants to use particular strategies. Critiques from this standpoint (e.g., Ellis, 2007; Lobato, Ellis, & Munoz, 2003) favour ‘actor oriented’ perspectives, investigating transfer from the point of view of the learner not the researcher and thus advocate observational, rather than experimental, research methods.

This perspective involves a reconceptualisation of what it means to ‘get it wrong’. From a traditional cognitive perspective, expertise in one area can be seen as ‘interfering’ with learning in another and when it does, this is deemed negative transfer, characterised by learners “mindlessly bringing to bear inappropriate knowledge and skill” (Perkins & Salomon, 1989, p. 22). It is obvious from such a tone that ‘negative transfer’ is something

to be avoided at all costs. However, from the actor-oriented perspective such observer bias as this might be short sighted. Few would argue that the grammatical over-generalisations of young children (e.g., when a child says ‘goed’ meaning ‘went’) are a bad thing. They are instead the surfacing of the child’s current theory. In the same way “the requirement that researchers find improved performance between transfer tasks may prevent them from capturing instances in which students construe situations as similar, but do not benefit from such constructions in terms of increased performance” (Ellis, 2007, p. 223). That is, when learners are partly right or have partial understanding, the finding of negative transfer is an uncharitable and potentially inaccurate interpretation of current learning. Using an ‘actor oriented’ perspective, the researcher shifts the focus to consider the learner’s point of view. In this way, the research can incorporate children’s views and conceptions while they are attempting to generalise, regardless of whether they get the correct answer. Such research uses observational methods to look for evidence of previous learning being used, and to identify how learners perceive situations as similar.

2.6 Transfer in Situativity Theories

For situativity theorists learning does not transfer from place to place but is contextualised. This helps explain why transfer does not occur when sought in experimental studies, in that our conception of transfer is inappropriate. However, as St Julien (1997) points out, “situated cognition, taken seriously, makes a problem of the opposite condition. How is successful transfer explained?” (p. 265). There are undoubtedly instances where people do successfully transfer understandings across situations and there remains the question of the application of prior knowledge in learning. In addition, there is no solution to the concern to make school learning useful for future and outside school contexts.

For these reasons, some situativity theorists refuse to reject transfer outright, but prefer to reframe the question. For example, Greeno (1997) claims that the transfer question needs to be reframed to ask, “When someone has become more successful at participating in an activity in one kind of situation, are there other kinds of situations in which that person will also be more adept?” (p. 11). For Greeno, what transfers is not knowledge from task to task, but patterns of participation in activity. The key conception that allows this patterning is human agency; people’s roles in defining their various activities as similar or different. He offers the notion of ‘conceptual agency’ to describe the way an actor uses and chooses “material or conceptual resources, which are appropriated, adapted or modified for a purpose in the agent’s activity” (Greeno, 2006, p. 538). I would note here that such ‘conceptual resources’ do sound transportable. However, Greeno treats such agency as positioning, in terms of the role of the agent in treating conceptual resources as modifiable, and a framing of the activity as one which the agent has the power to shape. Other situated theorists also frame knowledge as a ‘tool’, which it is possible to acquire, without being able to use (J. S. Brown, Collins, & Duguid, 1989), but which can ideally be employed for particular purposes by participants (Smagorinsky, Cook, & Reed, 2005).

Because learning can never be de-contextualised, hence abstracted in the traditional sense, theorists of situated learning have sought alternative theories to account for the way knowledge as tools or resources can be used in a range of activities and for learners’ increasing abilities to use knowledge flexibly. If the social and environmental features of an activity become part of the experience, then as learners become more flexible in applying their knowledge, they do so in a wider variety of contexts. Thus, from a situated learning perspective, learning is not abstracted. Instead, situated learning theorists have preferred to identify ways that knowledge is re-contextualised, rather than

de-contextualised. Wagner (2006), for example, recorded ongoing tutorial interviews with one student, Maria, as she gradually came to call into play knowledge resources that she always had but were previously not cued. Wagner describes the process by which she came to perceive the relevance of knowledge previously part of different 'frames'. In describing the way that knowledge resources are gradually used for a greater range of contexts based on wider experience, Wagner characterises transfer as the process of "incremental refinement of knowledge resources that account for – rather than overlook – contextual variation" (p. 1). Such continual contextualising of knowledge again relies on learners' agency in interaction with the features of the situation that are constitutive of meaning such as artefacts, symbols and social framing.

Gee (1997) also considers concept development from a situated perspective. He notes the pattern-making tendencies of the mind and describes what he calls connectionist theories of how the mind works as a flexible and adaptable pattern maker. Gee describes the way that learners constantly reflect on and in their activities, "Their concepts are intimately tied to practical situations and courses of action and are fluidly adapted and changed in actual practice. Their concepts do not sit formed once and for all in their heads in grand isolation from the vicissitudes of practice and judgement" (p. 236). Thus, in activities learners constantly recreate a 'customised version' of concepts in order to fulfil their needs and achieve their goals. For an individual, concept development is always on three levels: the environmental which is the direct perception of the world; the social which includes cultural models and their values; and the mind, in terms of pattern recognition. Gee also postulates the metaphor of situated meanings, which are neither so general as to be unusable nor so specific that they are not generalisable.

From the ‘actor oriented’ perspective, Lobato (2006) also considers ways in which learners make generalisations across situations based on patterns. In her estimation, transfer is reliant on the extent to which learners construct similarities between the situations. From this point of view learners do similar things in different situations because of the similarities between the situations.

The issue of similarity is taken up by Marton (2006), who argues that transfer is dependent on notions of similarity and, crucially, difference. There cannot be any transfer without sameness, he argues, or there would be nothing to transfer. But, equally, there cannot be any transfer without difference (or it is not transfer, just the same activity). In order to discern similarity and difference, Marton calls upon a perceptual theory of learning (Gibson, 1966), in which learning to perceive is learning to find the differences that are most critical in relation to our goals. From this point of view, learning is described as seeing things in particular ways based on our experiences and patterns of variation. Thus perception is learning to discern the distinctive features of activities.

Greeno, Smith and Moore (1993) also draw on Gibsonian notions of perception and call attention to the features of the environment to understand how learning might be transferred, or more precisely from a situated perspective, ways in which learning may be generative, rather than discrete. Drawing on the concepts of ‘affordances’ and ‘constraints’, they describe features of the environment or activity which allow similarities of activity between two contexts. Thus, it is theorised, transfer is a relation between two situations which involves interaction between person and the situation, “For an activity learned in one situation to transfer to another situation, the second situation has to afford that practice, and the agent has to perceive the affordance,” (p. 102). Accordingly, affordances that are present can be properties of artefacts designed to

support the activity, and, therefore, instruction should include attention to affordances, including artefacts, that stay the same across situations and support success.

The dual concepts of perception and affordance allow an understanding of how learners can identify similarities and differences between situations. In her studies of mathematics classrooms, Lobato (2006; Lobato, et al., 2003) identifies one way that this happens. She identifies ‘focussing phenomena’ as features of classrooms that draw learners’ attention to mathematical concepts. Examples of such phenomena include (mathematical) signs and resources as well as mathematical language and artefacts. Lobato argues that what students notice is co-constituted by these phenomena along with students’ goals and prior knowledge.

Other features of environments that afford generalisation have been described by Engle (2006), who observed features of a classroom environment that afforded generative learning. She identified instances of successful generalisation at the group level and then looked back through her data to see if there were conditions that promoted transfer in individuals which were brought about by any particular features of the groups or their dynamics. Engle’s analysis identifies ‘framing’ as a crucial feature of the classroom that promotes ‘intercontextuality’ across situations. Two particular aspects that were framed by the teacher in this study were time and participation. Specifically, transfer was more likely to occur when students were framed as ‘authors’ of knowledge who were accountable for it over time, and when learning contexts were framed as part of a larger, ongoing activity, in which the students themselves were participating. This was achieved by connecting students’ contributions with those of other students and with previous and future classroom activities and also with audiences outside of the classroom. These aspects are just two of the ways that the learning in classrooms might be framed through

social interaction in order to foster continuity across situations, ‘intercontextuality’, thus promoting transfer.

In summary, what has been traditionally thought of as a cognitive construct as transfer has been extended by theorists of situated learning and socio-cultural approaches to account for ways in which learners’ environments, activities and social and cultural factors interact to produce changing patterns of participation across contexts. Thus, even given a situated theory of learning, theories of transfer and generalisation are still important to describe the ways that people learn adaptively in each new situation. The difference is one of focus. Whereas cognitive theories focus on an individual’s acquisition and application of skills and knowledge, situated theories address development as embedded within participation in activities. As Greeno suggests, “Everything that people do is both social and individual, but activity can be considered in ways that either focus on groups of people made up of individuals, or focus on individuals who participate in groups” (Greeno, 1997, p. 9). Therefore, it is my contention that cognitive and situated theories are not incompatible. Hence it is possible to draw from both traditions depending on the lens needed. This is the approach taken in the following section which draws out key concepts applicable to professional development and the teaching of writing.

Within both paradigms, theories of transfer sit within more general theories of cognition and generalisation as a learning process. As such they draw upon particular discourses to explicate theory. Current theories of transfer often reflect the more general debates between neo-Piagetian, Vygotskian or Gibsonian theories of learning and development and conceptualise transfer in terms of a particular framework, be it a cognitive, socio-cultural or ecological theory of learning. Moreover, in the same way that early debates reflected the paradigm shift from behaviourism to cognitivism, so the

modern transfer debate mirrors the shift from cognitivism to situativity. Modern theorists, therefore, place differing emphasis on cognition and cognitive representations, activity and participation or socio-cultural and environmental, depending on their lens. None, however, deny an interrelationship between an agent, the activity and the environment.

Situated and socio-cultural theories of learning have come to underpin much current educational research. However, very recently, from the perspective of the sociology of curriculum, there has been some reaction against the egalitarian underpinnings of the situativity position, namely the positioning of real world or everyday knowledge as equal to disciplinary knowledge and the rejection of a differentiation between knowledge and experience, as discussed. While the sociological background of social constructivism is not strictly relevant here, what is pertinent is that Young (2008) seeks to acknowledge social-constructivist positions (which consider that knowledge is socially and culturally constructed) but to distinguish between 'context dependent' and 'context independent' forms of knowledge. Context dependent forms, in his view, are acquired through participation in the world that one is part of. In contrast, context independent forms of knowledge (which Young admits is a misnomer, referring instead to specialized, discipline-specific contexts) are conceptual and not tied to particular experiences, thus providing a basis for generalization. Young's hypothesis is that such context independent knowledge is acquired in schools and universities and allows learners to go beyond personal experiences. Presumably, this is the type of culturally and socially reproduced knowledge that allows me to know about the existence and nature of electricity, despite the fact that I have never physically seen electricity, electrons or polarity. Young does not address the 'usefulness' of context independent knowledge, or the ways that these forms of knowledge might be applied in out of school contexts, or

whether they ever actually need to be. His critique is illustrative, however, of a possible backlash against arguments for the specificity of context dependent knowledge.

2.7 Teaching for Transfer

Cognitive and situated theories of learning both offer conceptual resources which can be applied to learning situations which require transfer by learners. As discussed, most workshop or classroom based models of teaching and learning are predicated on the expectation that participants will apply what they learn. In the current study, workshops with teachers, designed to increase pedagogical content knowledge about writing, could only impact on student learning if teachers applied the knowledge learned in the workshops in ways that changed how they designed and delivered programmes of writing instruction. From the point of view of the teachers themselves, the learning in their classrooms was only useful to their students if these students could apply it in other contexts within school, contexts outside of school and also use today's learning in order to build future learning.

Cognitive theory offers insights about the learning of individuals: the importance of depth of learning, the way that learners might create and invoke schemas to build on prior learning, and the role of metacognition in cueing for transfer as well as dispositions and goals which foster transfer. From situativity theory we also have understandings about the social and cultural contexts in which learners participate, the cultural goals and values and framing inherent in activities and learners' use of focusing phenomena in environments.

Common to both these theoretical foci is the importance of learners' goals in transfer and generalisation. Situated learning theories add a social and cultural dimension

to our understanding which may help explain some of the failures of the traditional transfer experiment. Such things as goals, motivations, relevance and importance are evaluated by the learner, with respect to cultural and social frames and experience and these are important factors in learning situations, previously neglected by cognitive theory. For example, when participants in the traditional analogical reasoning experiment are asked to 'remember' the initial problem and solution, their goals have been manipulated in that learners are asked to remember this initial analogue 'for later', and while it was not tested, participants may have done just that; 'remembered'. For the learner the memorisation task was framed as a different activity than that of the problem solving task. It seems reasonable to expect that if participants had been told the overall plan at outset, then transfer would have undoubtedly occurred (I am going to show you a story and then pose a problem; I will test whether you can solve the problem using the story...). In the same way, memorising facts for a test may be, for learners, a different activity from using those facts in a problem solving context. Having been 'framed' as a receiver of organised knowledge, this framing may create a constraint to transfer in a situation where such knowledge recontextualisation and reorganisation of knowledge is necessary through what Greeno terms 'conceptual agency'.

For those designing and controlling learning experiences, such as teachers and professional developers, if transfer is the aim, then it is necessary to draw on the insights offered by both discourses, in the same way that educators always use both cognitive and social lenses when teaching. Firstly, depth of learning is needed if learners are to be expert enough to use knowledge flexibly. This requires going beyond surface manipulation of knowledge resources (as in the parable of the Chinese room) to a level where the learner has sufficient depth of knowledge as to have agency over that knowledge and the confidence to apply it flexibly. Whether application of such

knowledge is a result of either abstraction or recontextualisation of knowledge, the common implication in learning environments is that learners need to have sufficient learning experiences that they understand a concept at a deep level. Moreover, part of what is learned is social: the goals, expectations, framing and purposes for learning are as much a part of the learning experience as the ‘abstract’ knowledge resources. Thus continuity between contexts is as much about continuity of role (i.e. authoritative knowing) as it is about continuity of knowledge.

In their reconceptualisation of transfer as ‘preparation for future learning’, Bransford and Schwartz (1999) point out that in order for learners to build on their prior knowledge they need to ‘know with’ their existing knowledge. Schwartz and Martin (2004) use this conception to design activities which assist learners to make sense of what is being told to them by tuning them into the relevance of new information based on their prior knowledge, “Essentially this is the transfer process, but one where learners are transferring in rather than out of the observed situation...When preparing students for future learning the instructional challenge is to help students transfer in the right knowledge”. This necessitates widening the conception of the ‘ABC’ paradigm to consider not just an initial learning situation, but all prior knowledge that may be pertinent. Taken a step further, all use of prior knowledge is about transferring into (rather than out of) a situation. If all learners bring prior knowledge and experiences to current activities, how do learners know when to call upon what prior knowledge? Thus, the application of prior knowledge is an issue of ‘cueing’. But also it is an issue of framing, in terms of designing activities that bring relevant prior knowledge into the same ‘frame’ for the learner, and of activity; in considering the features of the activity that might afford or constrain this transfer for learners.

It is essential then that students perceive the relevance of past learning to current learning and the relevance of current learning for the future. The failure of school based learning is often a failure to create ‘intercontextuality’ (Engle, 2006) for students in terms of linking to their goals or seeing the reason for learning something, “some of the most spectacular and widely decried failures of transfer...may largely reflect the fact that material taught in school is often disconnected from any clear goal and hence lacks a primary cue for retrieval in potentially relevant problem contexts” (Gick & Holyoak, 1987, p. 31). Teaching for transfer therefore is necessarily about transfer in and transfer out of any given activity – how can students ‘cue’ the appropriate prior knowledge needed, and how can we frame current learning in such a way that it will be ‘cued’ when needed in future contexts?

The issue of cueing has two parts. Firstly, at the individual level, the learner needs to perceive the similarities and discern differences between the contexts. Based on cognitive theory learners are taught to take responsibility for cueing through self regulation and monitoring of strategy usage and the development of long-term knowledge goals. What can be useful for educators are the ways in which learning environments can be also structured so that such cueing occurs, through focusing phenomena and framing.

The concept of focusing phenomena, those things in the environment that make the knowledge content of tasks salient, links features of instructional environments with the particular ways that individuals generalise their learning experiences. Focusing phenomena: signs, specialist language and equations (in the mathematics class) offer one way of creating intercontextuality or continuity across learning experiences, so that the participants in those activities perceive similarities among them. In classrooms, self regulation and other metacognitive strategies have been found to be successful,

particularly in writing instruction (Graham & Harris, 1998; Hyon, 2001; Schunk & Swartz, 1993). Given peer response conditions, Self Regulated Strategy Development has also been successful in promoting transfer of writing success to uninstructed genre (K. R. Harris, et al., 2006). Writing strategies, therefore, have been proposed as a basis for generalisation of writing skills (Alber-Morgan, Hessler, & Konrad, 2007). Theoretically, the strategies, once made explicit through mnemonics, offer focusing phenomena for these writers, as they remain constant across various writing purposes. In the current study of teachers' transfer, the writing assessment tool, asTTle (Assessment Tools for Teaching and Learning, University of Auckland, 2005a) offered a potential focusing phenomenon for teachers, as a part of the teaching environment that remained constant in the initial learning experiences and in subsequent application in classrooms. As will be discussed, the tool provided the basis for the professional development programmes, by identifying intertextual links either within purposes, as set out in the tool, or across purposes. Theoretically, in order for teachers to use this tool as a focusing phenomenon, they needed to understand it deeply and in ways that allowed for conceptual agency so that they could use the tool flexibly in order to support their needs across differing writing purposes.

In general, intercontextuality is also afforded by social framing. As Engle (2006) concluded, transfer occurs when learning contexts are framed as temporally connected and when students are framed as contributing to a broader community of people involved in that academic endeavour. When students were framed as 'authors' of their knowledge, they were positioned as having authority over the knowledge but also as having responsibility for the knowledge. Framing students in this way links again to their goals and roles as well as the linking of past and future contexts for using the knowledge gained. Authors have different roles to receivers of knowledge, in that they can apply or

use knowledge ‘tools’, rather than just remember them (and supply learned responses on demand). In writing classrooms it is possible that reified genre features or frames act as a constraint to transfer by denying authorship and thus conceptual agency. As received, learned structures for writing, these ‘scaffolds’ may support task goals but deny students authority over their writing, thus constraining transfer.

In the current study, for the teachers of writing, received lesson plans, genre forms or programmes of work may have constrained learning in the same way. While they would support the task at hand, they constrain long term application by denying conceptual agency. By implication, for intercontextuality to occur between the professional development in this study and its application, teachers instead needed to be framed as authors of pedagogical content knowledge about writing and authoritative participants in the larger exercise of improving writing instruction. As will be discussed further, this was the approach taken to professional development in the study: Teachers in both professional development groups were given no programme of work to follow. Rather, intertextual theory was discussed and the assessment tools were read closely. As part of the workshops, the resulting implications for practice were developed by teachers. In this way, the intention was that teachers would design and refine classroom programmes based on an understanding that they were authoritative participants in the teaching and learning process. Therefore, intercontextuality was afforded (ideally) by building on current understandings about writing and teaching writing so that teachers could relate the professional development to current practice and the professional development could therefore be directly relevant for their visions of future practice.

Theoretically, the antithesis of intercontextuality, and therefore a constraint to transfer, is the compartmentalisation of knowledge. This is because learners are excluded

from seeing the 'big picture', thus the intercontextuality around what they are learning. As Haskell (2001) describes, "Recent evidence indicates a conscious, sequential and goal-oriented approach during problem solving can decrease the acquisition of mental schemas, and that this significantly reduces the quality of transfer" (p. 52). Again, short term goals impede transfer as learners tend to work backward from their goal. In essence, such an approach that breaks learning down into lists of discrete steps mean that learners' memory is flooded with detail rather than big picture awareness. Therefore, in writing classrooms, and similarly in professional development around writing, there seems to be a need always to remind learners of the big picture, rather than creating learning intentions which compartmentalise learning into measurable blocks of time or content, or identify easily achieved fragments of learning that flood the memory with small, discrete steps and are not part of an ongoing activity.

The current study investigates transfer of learning, particularly across writing purposes. Based on these theories of transfer, therefore, teachers, as learners participating in professional development, need both depth of knowledge and a basis for 'cueing' that knowledge in order to use it effectively when teaching students to write for differing writing purposes. A professional development environment that would provide for these theoretically would need to provide an overall awareness of the purposes of the professional development, highlight similarities and differences either within or between writing purposes, frame them as being part of the same ongoing, larger endeavour, and identify focusing phenomena to provide intercontextuality between the writing purposes.

With all this in mind, intertextuality was used as a conceptual tool upon which to base professional development in writing. Intertextual theories offer a basis for transfer in that they frame previous experience with texts as relevant resources for writers by

identifying the links between texts and, hence, the link to prior knowledge about texts. Socio-cultural understandings about social motives, roles and goals in activity are also paralleled by intertextual theory, and socially constructed ways that texts and achieve particular goals. In addition, notions of framing learners as authors and participants in wider communities resonate with authentic writing, and authorship in writing instruction. The notion of learners as polycontextual and that framing in instruction can create intercontextuality is also a feature of intertextual theories, in that learners have unique intertextual histories built up through multimembership in a number of textual communities. It was hypothesised therefore that intertextuality as a conceptual tool had potential to create intercontextuality for teachers, making prior knowledge about texts and prior literate experiences relevant for writing instruction.

While intertextuality is hypothesised to be an effective vehicle for transfer in general, its mechanisms for doing so were investigated empirically in the current study. Specifically, it was also hypothesised that differences in student achievement patterns might arise as a result of which specific texts were ‘framed’ as relevant by offering differing types of intertextual links. This potential of intertextuality as a conceptual tool for teachers of writing, and the differing types of intertextual links possible are explored in more depth in the following chapter. In general, the intertextual links investigated by the current study are, firstly, genre-based links (which reflect writers’ different social purposes in producing texts) and, secondly, dimension-based links across genre (which reflect the different dimensions of all texts, such as audience awareness, content or structure) using the rubrics set out in the asTTle assessment tool (University of Auckland, 2005b).

The asTTle assessment tool was used as a focusing phenomenon in the current study, thus providing the material conditions for using intertextuality as a conceptual tool. It provided not only the basis for the student assessment but also the basis for exploration of texts in general and was thus a support for the development of pedagogical content knowledge (see Chapter Three). As a feature of the tool, purposes for writing are offered as discrete ‘types’, which have different features and meet different needs. While this resonates with socio-cultural understandings about the nature of writing, there is a danger that teachers’ transfer, in terms of understanding of and using the tool across writing purposes, may be constrained. If this were the case, it could mean that teachers would be unable to raise student achievement in differing writing purposes. This study addressed this compartmentalisation directly by comparing two approaches which differed in terms of framing texts as relevant prior knowledge. The first approach offered workshops which focused specifically on a single purpose for writing. Workshops in this professional development approach (Genre Focus: GF) compared texts within a single writing purpose. This approach offered depth of learning, as texts with a similar purpose for writing were explored based on multiple examples and similarities identified, framed as relevant, and therefore ‘cued’. The second approach (dimension focus: DF) compared and contrasted different texts written for differing purposes by focusing on the common ‘dimensions’ of writing (such as content, language, structure and audience awareness). This more general approach potentially offered explicit generalisability in that similarities and differences between writing purposes along these dimensions were identified.

Using theory as a guide, it was hypothesised that the two approaches might have had differing profiles in terms of their respective effects on student achievement. The GF professional development, focussing as it did on one writing purpose, provided for greater depth of learning by working with multiple examples from a single, focus genre.

Therefore, acceleration of this writing purpose could potentially be expected. However, because of the specificity, it could be hypothesised that this may result in less generalisability, as other writing purposes were not framed as part of the endeavour, and teachers may therefore be unprepared to teach other writing purposes. In contrast, it was hypothesised that a DF approach may result in relatively less depth of understanding in one specific purpose, but more knowledge that was generalisable across writing purposes, due to the fact that teachers would be working with examples from a number of differing writing purposes. This would translate, in terms of achievement, to more broad-based gains. Hence, while achievement in a specific writing purpose may accelerate at a relatively slower rate (as compared to the GF condition), gains would also be made in other writing purposes.

Therefore, based on theories of transfer with generalisability of learning for teachers as the goal, two professional development interventions were designed to focus specifically on intertextuality as it related to instruction in writing, differing only in the types of intertextual links made explicit during workshops. The following chapter reviews the literatures which discuss pedagogical content knowledge and intertextuality, and argues that intertextuality is a potential powerful vehicle for raising teacher pedagogical content knowledge about the teaching of writing, thus potentially raising student achievement.

Chapter Three: Raising Pedagogical Content Knowledge Using Theories of Intertextuality

In order to design professional development in writing that will transfer across writing purposes, the present study investigated whether student achievement in writing was best raised by professional development which focused on building teacher pedagogical content knowledge through specific genre-based intertextual links between texts, or more general intertextual links across writing purposes. There were two assumptions underlying such a research endeavour. The first was that professional development is likely to raise student achievement; the second is that theories of intertextuality are a potentially effective focus for that professional development. As such, the following discussion comprises two parts, focusing on each in turn. Firstly, the premise that professional development which focuses on teacher pedagogical content knowledge can raise student achievement is discussed. The second section comprises an argument that theories of intertextuality offer a potentially powerful vehicle for building teacher pedagogical content knowledge in writing.

3.1 Raising Achievement by Building Pedagogical Content Knowledge

In order to make the case that professional development is a worthwhile and potentially valuable exercise, it is also necessary to believe that teachers make a perceptible difference to the outcomes of learners. This is backed by the data, both in New Zealand and internationally, that show the effect of quality teaching on student learning, “There are strong empirical grounds for believing that teachers can and do make a difference and that consistent high quality teaching, supported by strategic professional development, can and does deliver dramatic improvement in student learning” (Rowe, 2003, p. 27).

When investigating schooling, researchers increasingly conclude that, based on analysis of student achievement scores, the most important educational factor affecting achievement is the teacher (Alton-Lee, 2003; Muijs & Reynolds, 2001; Nye, Konstantopoulos, & Hedges, 2004; Rowe, 2003; Wright, Horn, & Sanders, 1997). In reviewing this literature, Alton-Lee (2003) identifies quality teaching as the most influential component on student outcomes, including participation, involvement, achievement and social outcomes. She finds that teachers and classrooms have an influence on learning which is of a “far greater magnitude” than the influence of schools. “Our best evidence internationally is that what happens in classrooms through quality teaching and through the quality of the learning environment generated by the teacher and the students, is the key variable in explaining up to 59%, or even more, of the variance in student scores” (Alton-Lee, 2003, p. 2).

Given the importance of the teacher in the quest for learning, improving the ability of the teacher to deliver high quality teaching programmes seems eminently sensible. When considering the magnitude of teacher effects compared to other school based variables, it is clear that the agents for raising student achievement are teachers. “The immediate and clear implication of this finding is that seemingly more can be done to improve education by improving the effectiveness of teachers than by any other single factor” (Wright, et al., 1997, p. 63).

While there is an empirical relationship between quality teaching and student achievement, the link between teacher knowledge and student attainment has always been notoriously difficult to prove (Ball, 2000). The empirical link that is only just beginning to be made is that quality teaching is facilitated by greater teacher knowledge. There is relatively scant evidence to date that good teachers know more about their subject than

others. One possible cause, explored by researchers interested in measuring teacher knowledge, is that studies have traditionally measured teachers' content knowledge, for example results of course attainment or educational qualifications, rather than the knowledge specifically necessary for teaching. Possibly, teachers need to know content "in ways that differ from what is typically taught and learned in university courses" (Phelps & Schilling, 2004).

However, research and intervention studies do support the fact that professional development can impact positively on student outcomes. In the USA, studies of school reading improvement show ongoing professional development to be one of the important factors needed if students are to achieve in reading (Taylor, Pearson, Peterson, & Rodriguez, 2005). Similarly in New Zealand, research interventions based on professional development show the potential for teachers to raise rates of progress significantly (Parr, et al., 2006; Phillips, McNaughton, & MacDonald, 2004). These studies do not measure relative effectiveness between teachers, but measure effectiveness, in terms of student achievement, of the same teachers before and after professional development; this is the approach taken in the current study. There is now also an emerging field of study which seeks to document the way that such growth in teacher knowledge impacts on classrooms. In the context of reading instruction, for example, McCutchen et al (2002) worked with teachers to increase their knowledge of phonological awareness in reading. As a result, they were able to raise teacher knowledge, document resulting change in teacher practice and then measure improved student learning.

In writing, teacher professional development has also been shown to have a positive impact on student achievement. As an example, research on the National Writing Project in the USA (cited in Borko, 2004) follows teachers who participate in summer

institutes and workshops in order to lead writing professional development in their own schools. While teacher knowledge is not explicitly measured, participants demonstrate classroom practices, study research about teaching writing and immerse themselves in writing. The resulting analyses of student writing show “improvements in organisation, coherence, and use of writing conventions” (Borko, 2004, p. 11). This relationship seems intuitively straightforward; having participated in teacher professional development, participating teachers now know more about the teaching of writing to draw on when teaching. Investigating the direct link between teacher knowledge about writing and student achievement in writing is, however, a nascent body of research.

Parr (2009) sought to measure the links between teachers’ knowledge about the teaching of writing and student achievement. Using hypothetical scenarios of classroom lessons and results of student assessments, teachers were asked to comment on what they expected the teachers in these scenarios should focus on, rate the effectiveness of the hypothetical lesson and comment on what they would do to improve it. She found a significant relationship between a teacher’s knowledge level at the end of the year and the class’ progress during that year. The focus on scenarios of teaching and student achievement meant that the knowledge measured was that which was directly applicable to teaching, or pedagogical content knowledge (PCK).

The conception of pedagogical content knowledge comes out of studies of teachers and teaching which have long been interested to discover the sorts of things that teachers do, and need to do, in order to become expert in their field (e.g. Tsui, 2003). In order to try to conceptualise the vast area that is teaching and to describe the relationship between knowledge and process “it is necessary to reduce the conceptual and contextual complexity of teaching” (Gess-Newsome, 1999). This is most commonly achieved

through the generation of models and metaphors which seek to illustrate teachers' knowledge through a particular interpretive lens, reminiscent of Aristotle's notion of *divisio* or partitioning a subject into analytical categories or classifications – at once unifying and dividing. “These categories are not found in the world, but are constructs that composers use to set boundaries, organising collections of facts and ideas into coherent discourse, thus maintaining a certain way of seeing the world” (Greene & Ackerman, 1995, p. 392). Examples of pioneers in the field include Schön (1982), who conceptualised teachers' knowledge as “knowledge in action” and highlighted the notion of “reflective practice”, and Elbaz (1983), who was concerned with describing in detail the personal practical knowledge that teachers possess. In Elbaz' view the teacher is an agent “with an active and autonomous role shaped by her classroom experience” (p. 4) and she identifies five categories of practical teaching knowledge: knowledge of self, knowledge of the milieu of teaching, knowledge of subject matter, knowledge of curriculum development and knowledge of instruction.

A further illustrative model was developed by Shulman (1986), who argued that it was necessary to investigate the relationship between teachers' subject matter knowledge and the instructional programme they provide for learners. For Shulman, the “missing paradigm” is the neglect of subject matter in research, “No-one asked how subject matter was transformed from the knowledge of the teacher into the content of instruction. Nor did they ask how particular formulations of that content related to what students came to know or misconstrue” (Shulman, 1986, p. 6). He went on to identify three types of content knowledge which would have implications for teaching: subject matter knowledge, pedagogical knowledge and curricular knowledge. A working definition of pedagogical content knowledge was understood as “the ways of representing and formulating the subject that make it comprehensible to others” (p. 9).

The investigation into the knowledge necessary for teaching was continued by Grossman (1990), who proposed a model for teacher knowledge that includes four general areas: general pedagogical knowledge, subject matter knowledge, pedagogical content knowledge and knowledge of context – which includes students, community school and district (p. 5). She highlighted pedagogical content knowledge as being that which is central to the craft of the teacher, “It is this pedagogical understanding of the subject matter that distinguishes between the subject matter expert and the experienced teacher” (p. 10). Pedagogical content knowledge, according to Grossman, has four central components. The first is the overarching conceptions, knowledge and beliefs about purposes for teaching a subject at different grade levels. The second component is knowledge of students’ understanding, conceptions and misconceptions of particular topics in a subject matter. Thirdly, teachers need curricular knowledge, including knowledge of the materials available and an understanding of the horizontal and vertical curricula for each subject. Grossman’s final component is knowledge of the instructional strategies and representations for teaching particular topics.

Such frameworks offer a starting point for investigating pedagogical content knowledge in writing. While pedagogical content knowledge is conceived as a transformation of several different types of knowledge: “a special amalgam of knowledge that links content and pedagogy” (Ball, 2000, p. 245), in essence it is a construct designed to describe the way that the knowledge needed to teach something is different from the knowledge needed to do it oneself. Thus, pedagogical content knowledge “includes an understanding of what it means to teach a particular topic as well as knowledge of the techniques and principles required to do so” (Wilson, Shulman, & Richert, 1987), in other words: all that a teacher needs to know in order to teach writing effectively.

What this body of knowledge might look like is only just beginning to be described, “With respect to content knowledge needed to teach writing, there is a dearth of research” (Parr, et al., 2006, p. 86). As Ball, Thames and Phelps (2008) point out, there is little empirical evidence to back broad claims about what teachers need to know. In writing, this is especially true. It is possible to conceptualise that the knowledge of the subject matter of writing, not specific to teaching, would be that which is necessary to be a competent adult writer. Given this conception, pedagogical content knowledge will be that which teachers need to know explicitly, that adult competent writers do not.

Were it possible to transform this adult knowledge of writing into knowledge for teaching, teachers would need to be able to articulate, both to themselves and to their learners, what it is that they, as adult competent writers do, as well as the developmental sequences required in achieving that end point. The effort to understand the needs of a literacy learner requires of a teacher a capacity to deconstruct one’s own knowledge into component, non automatic parts. This idea of decompression or “unpacking” of one’s adult understandings has been described as a feature of teaching which means that “paradoxically, expert personal knowledge of subject matter is often ironically inadequate for teaching” (Ball, 2000, p. 246). Theoretically, this is because, for the adult user of language literacy in general, and writing in particular, has become automatic. Articulating why one may have chosen a particular word or sentence structure actually requires an understanding of the nature of writing beyond that of the ‘competent’ adult writer. Hence the need for knowledge of writing which is specific to teaching: pedagogical content knowledge.

What, then, the body of knowledge for teaching writing might look like is only just beginning to be explored. Parr (2009) outlines some possibilities,

“Clearly, teachers need more knowledge than a competent adult writer. They need to know, at a conscious level, how texts work to achieve their communicative, rhetorical purposes, including knowledge of the features of text most commonly employed to support writing for a particular purpose. This involves a detailed knowledge of language and text structures, what might be considered subject matter knowledge. But PCK also involves the ability to articulate and make accessible to developing writers that which is implicit and often at a level below conscious thought; to unpack what they are doing as they engage in the writing process... Further, teachers need to marry this explicit knowledge... with knowledge of the developmental trajectory that may operate in learning to write and of the approaches, activities and resources most efficacious to employ with developing writers” (p. 7).

Here Parr describes three components of the teaching of writing: knowledge of texts, knowledge of writers, and knowledge of learning. As such, her definition of PCK for writing encompasses the textual, the social and the cognitive dimensions of learning to write. In the present study, these aspects of PCK for writing were developed using ‘intertextuality’ as a guiding conceptual tool.

3.2 Intertextuality and the Professional Development Intervention

This knowledge of texts, of writers, and of what makes good writing is the basis for professional development in the present study which focused on ‘intertextuality’. Most generally, intertextual theories consider texts collectively by identifying the network of relationships between texts, “by seeing texts as incorporating other texts instead of standing alone as discrete units” (Nelson, 2008, p. 446). Theories of intertextuality from a range of disciplines offer insights for teachers on three levels relevant to the pedagogical

content knowledge to teach writing. Firstly, intertextuality offers an understanding of texts themselves and the various ways that meaning is created in relation to other texts; arguably, knowledge that is essential but automatic content knowledge for writers, which needs to be ‘unpacked’ knowledge for teachers of literacy. Secondly, intertextuality offers insights into the social nature of texts and the weaving and creation of identities through writing, which is pedagogically important as a basis for thinking about the way that teachers might most effectively organise and orchestrate classrooms as social sites for learning as meaning and identity construction. Finally, intertextuality explores aspects of cognition in regard to the way that learners might draw on relationships between texts and prior knowledge of texts as a strategy for composition and comprehension.

3.3 Intertextuality: Textual, Social and Individual Perspectives.

Intertextual theory contends that texts do not stand alone, but embody elements of other texts, both when being written, and when being read. Drawing from the Latin derivation of the word ‘text’ (meaning ‘woven’, as in ‘textiles’ and ‘texture’) (Hartman, 1992), theories of intertextuality seek to illustrate the way in which all texts draw on features and aspects of other texts. Depending on the focus of analysis, theorists and researchers from different disciplines have differing conceptions of what constitutes a text and the ways in which intertextuality works to create meaning. Intertextuality may be identified as an attribute of (written) texts, in the way that they reflect other texts, for example functional linguistics defines all texts as an “intertext” of all that has gone before, all that is to follow, and all that is occurring in other texts, experiences and situations (P. Harris, Trezise, & Winser, 2004). In contrast, theorists from a sociolinguistic perspective emphasise the social construction of intertextuality, focusing on the interactions between people as the level of analysis (Bloome & Egan-Robertson, 1993). For cognitive

researchers, perhaps unsurprisingly, what is of interest is the way that readers and writers draw upon intertextual resources when comprehending and composing texts (e.g., Hartman, 1995; McGinley, 1992).

The various traditions also have differing conceptions of what constitutes a text. In his interviews with children about their composing processes, Cairney (1990), for example, limits his focus to written texts, and ‘stories’ in particular. In contrast, Bloome and Egan-Robertson (1993), view a text as “the product of textualizing” (p. 311), that is, a result of what people do; a social construction. For those focusing on semiotic or linguistic phenomena, a text is any sign that communicates meaning or a “meaningful artefact” (Kamberelis & Scott, 1992). Such variation in the definition of a text reflects a more general distinction between differing foci for study, namely, texts as artefacts, texts as inherently social interaction or using texts as resources for cognitive processes.

3.4 Traditions which Focus on Attributes of Texts

Traditions which focus on the intertextual attributes of texts include linguistic and literary theory. The term ‘intertextuality’ was first used by Julia Kristeva to describe the way that texts are a “mosaic of quotations” (Bazerman, 2004, p. 54), and was subsequently popularised in the work of Roland Barthes (Nelson, 2008). These theorists developed an understanding that texts are drawn from multiple sources, therefore echoing and building on other texts in an exponential network of connections. In this way, texts create possibilities of meaning. The traditions of linguistics and literary theory also analyse the way that texts position themselves in relation to one another and build upon one another in an ongoing and complex dialogue (Hartman, 1992).

Intertextual references in this ongoing dialogue can be an explicit or implicit feature of texts. These references can also be on a number of levels, for example through imitation of words, phrasing content, and text structure of another text. While it might be a specific reference to an individual text, it might also be a reference to a genre of literary texts (Bloome & Egan-Robertson, 1993, p. 306). Such references to genre are considered by Bazerman (1981), for example, who considers how texts create a dialogue, not only between the author, the audience and the subject matter, but also with the literature, through the way that they relate to the existing literature and anticipate becoming part of that literature.

From a linguistic tradition, Lemke (1992) draws on the semantic grammar of Halliday (e.g., 1975) for a theory of language that allows us to see the culturally constructed ways that texts can be linked. Lemke uses Halliday's description of grammar as a system of resources for three kinds of meaning making: thematic or topic-based, orientational stance and textual. Based on this, Lemke identifies that texts can therefore be linked at each of these grammatical levels. Thematic intertextual relations are texts that are culturally linked because they are generally on the same topic. At the next level, texts can be linked which have similar points of view or rhetorical stances. Finally, texts can be linked because of their similar textual structure. It may also be the case that texts are similar or linked at more than one of these levels simultaneously (about the same thing, from the same point of view and with the same structure) and can therefore be more or less likely to be a resource for interpretation. For Lemke, the 'intertexts' are those that are used to make sense of the text in question.

Analysis at the level of the text offers a potential for learners to examine textual features explicitly and identify the way that they are used. It provides a resource allowing

teachers and learners a way of looking at what Parr (2006) calls “how texts work to achieve their communicative, rhetorical purposes, including knowledge of the features of text most commonly employed to support writing for a particular purpose”. It is this knowledge of the way texts work for social purposes which is at the core of the writing marking rubric for the Assessment Tools for Teaching and Learning (asTTle) recently introduced in many New Zealand schools (Glasswell, Parr, & Aikman, 2001). Using this tool, teachers analyse texts created by learners and assess the extent to which they have achieved the intended purpose of the assessment task. Similarly, analysis at the level of the text allows learners to identify explicitly the way texts created by others work to achieve particular purposes.

Theories of text also provide a metalanguage; language about language which is necessary for discussion of language features, and potentially an important component of the pedagogical content knowledge for writing. Quinn (2004), for example, found that metalinguistic knowledge “empowered” one learner to “articulate specific features” of a genre and then to contrast it to other genre types (p. 245). The use of metalanguage in the teaching of writing enables teachers and learners to be explicit about the features they are investigating and to use these features to identify the relationships between texts.

3.5 Social Perspectives

The dialogic nature of written texts, referring to and building upon one another, which underpins the notion of intertextuality, draws attention to the inherently social nature of texts. While every text exists in relation to previous and forthcoming texts, the possibilities for the relationships are constructed socially. Writing and reading are therefore not solitary pursuits, but complex social activities (Rojas-Drummond, Albarrán, & Littleton, 2008), and writers relate not only to their readers but also to writers of other

texts (Nelson, 2008 p. 443). Moreover, the culturally and socially situated nature of language means that meanings are never stable, but are also socially constructed. In considering bodies of literature as well as individual texts, genre are therefore similarly contextual, cultural and social.

Building on linguistic analysis of text types, theorists have endeavoured to incorporate social theories into this analysis (e.g., Kamberelis, 1999; Kamberelis & Bovino, 1999; Kress, 1999). Rather than an examination at the textual or structural level of intertextuality, these theorists argue that texts are socially produced, and analysis of text must take into account the social questions that arise, for example, who made this text, for what purpose, in what context?. From this point of view, genre describes the relationships between the social purposes of a text and the way that purpose is achieved socially. Knowledge of generic forms is thus an aspect of the necessary cultural knowledge implicit in the curriculum, and “access to the curriculum of the school itself was in doubt without such knowledge” (Kress, 1999). Given such an understanding, “textual features and their analysis are important not only as linguistic exercises but for their value in inferring the social purposes of texts as well as the processes and contexts of their production” (Kamberelis, 1999, p. 407).

In addition to the dialogic nature of genre and a dialogic relationship between writers, readers and other writers, texts can also be dialogic in the sense that they are the matter for discussion. In this sense, texts are symbols which are part of an event (Bloome & Egan-Robertson, 1993), as various readers contest and negotiate meanings while participating in events which include texts, for example in classroom discussions around texts. Social theories of learning therefore focus on interactions about texts in this negotiation of meaning and the related social meaning making. Wells (1990) argues that

because overt adult behaviour is not helpful to learners in what is essentially a silent adult activity, what is important is that learners participate in “joint literacy events in which the significance of the literate behaviour is made overt through talk. It is in such verbally mediated assisted performance – in talk about text – that literacy is made” (p. 381). Bloome and Egan-Robertson (1993), argue that no text (oral or written) exists in isolation, but exists only in the ways that it relates to other texts. Intertextual relationships, according to this social view, are proposed, recognised, acknowledged and have social significance. Intertextuality can, therefore, also be a focus for social relations and interactions. For example when connections are mutual, one is positioned as belonging to a group, “mutually recognizing connections, be it among word structures or whole texts, can bring personal satisfaction and social significance” (P. Harris, et al., 2004, p. 254). As an example of this, Beach and Anson (1992) investigate the ways that intertextual meanings are constituted in peer dialogue journal exchanges which reflect shared stances and build social relationships. From this perspective, “Participants in a conversation – oral or written, adopt certain stances that constitute their social roles and relationships within particular literacy events with their own particular social histories” (R. Beach & Anson, 1992, p. 337).

These social roles and relationships and hence differential power are central to the social analysis of classrooms. Student participation within classroom events is affected by the social construction of intertextuality which “helps create and reflect a cultural ideology within the classroom” (Bloome & Egan-Robertson, 1993, p. 305). Rights and roles for example, are socially constrained in terms of who gets to make intertextual connections and which texts can be juxtaposed. Harris and Trezise (1997) point out that students are constrained in their access to intertextual possibilities by the teacher’s agenda, which is not always made explicit. Moreover, there is potential for loss of inter-

subjectivity because intertextuality is necessarily based on the children's and teacher's divergent intertextual histories. Harris, Trezise and Winser (2002) discuss the potential for such intertextual conflict when texts are mediated through discussion in classrooms, and highlight the difficulties for children, firstly in anticipating the teacher's intertextual links, and secondly, to make meanings in the ways that the teacher expects. Later, they also note the difficulty for teachers of "orchestrating children's resources" (P. Harris, et al., 2002, p. 12) given that each participant in an instructional event necessarily draws on a unique intertextual history, based on his or her participation in a number of cultural and social literary contexts.

Such investigations illuminate the intertextual links in play in the classroom, often controlled by the teacher at a subconscious level, and potentially subverted by students at an equally subconscious level. However, despite these descriptions of actual classrooms, there is general consensus that a classroom could be an effective site where intertextual connections can be made through discourse. This implies connected, rather than fragmented literacy learning approaches. Short (1992) makes the point that the nature of schooling works against the natural process of making connections, "Although the search for connections across texts and life is a natural part of learning, students' school experiences have led many to expect fragmentation in their learning" (Short, 1992, p. 314). If this is true, the nature of schooling is such that it serves to constrain students' intertextual links. In order for connection rather than fragmentation of learning to happen, some scholars advocate that teachers create environments for learning that afford an opportunity for learners to make their own connections. Researchers have identified a number of ways that teachers do this. It may be through the relaxation of participation protocols and exploration of divergent perspectives (P. Harris, et al., 2004). Alternatively, teachers can gather resources or artefacts from which intertextual histories can be built,

for example text sets or genre studies (Kamberelis & Bovino, 1999; Lenski, 1998; Quinn, 2004).

In addition to allowing for connections, many researchers advocate a more active role for teachers in helping learners build on intertextual resources. This might be in the form of modelling and demonstrating connection-building across texts (Lenski, 1998; Pantaleo, 2006) or through intertextual questioning (Lenski, 1998). Alternatively the teacher's role might be explicit demonstration of the ways that the "social and cultural specificity" of intertextual connections affect learners' identities and interpretations (Pantaleo, 2006, p. 178).

3.6 Cognitive Perspectives

Reflecting reader response theories of literary criticism, which in turn recognise the unstable, contextual and social nature of meaning, intertextuality can also be considered to 'reside' in the reader or writer. The intertextual links brought to texts can be those brought by the writer, but can also be those brought by the reader. From this point of view, the reader or writer is engaged in an attempt to make meaning, drawing on interpretative frameworks and connections between texts (Bloome & Egan-Robertson, 1993). Put simply, both readers and writers consider other texts when comprehending and composing.

While learning about texts occurs through discourse, educational research from a cognitive perspective aims to help students internalise this knowledge. At an individual level "readers must find their own path through a text" (P. Harris, et al., 2002, p. 13), continually comprehending based on the current text and the network of connections which create the context for that text. (Writers similarly create their own path, drawing on

the network of connections to create meanings and anticipate possible meanings for their readers.) Not only do readers and writers comprehend or compose based on past texts, but they also re-comprehend past texts based on the text currently being written or read. This is called the intertextual loop, because “making these links can bring about changes both in the mental model of the current text and in models of previously experienced texts stored in memory” (Lenski, 1998, p. 75). From this point of view, reading (or writing) is a process of ‘shuttling’ back and forth between the text being read or written, and the intertexts being drawn on as resources (P. Harris, et al., 2002).

Intertextuality is therefore a potential resource for learning – a continual process of seeking, identifying and creating patterns. Illuminating this process, Harris and Trezise (1999) explore the way that children’s “condensed” utterances reveal individuals’ strategies of meaning making, by identifying links, drawing analogies and engaging in “higher order thinking” (recontextualisation and generalisation). They make the point that it is essential that children’s ways of meaning are understood and taken up. “Teachers need to clarify and negotiate children’s utterances through probing, while allowing children to explore one another’s meanings and providing opportunity to explore impromptu utterances” (P. Harris & Trezise, 1999, p. 375). They suggest that teachers might achieve this by extending and elaborating on students’ links and linking analogies to other shared texts.

Given that intertextual histories are the resources for making meaning when composing and comprehending, it follows that experience with greater numbers of texts offer more resources for learners. Therefore, “differences between ability in reading and writing may reflect greater familiarity with particular genres of writing and literature” (Bloome & Egan-Robertson, 1993, p. 308). This is supported by theories of writing which

suggest that writers draw on discourse knowledge when formulating plans and task requirements (Hayes, 1996).

While acknowledging that intertextuality is, like all cognition, essentially social, pedagogical applications of research from the perspective of the learner focus on the way developing readers and writers either use or could use intertextuality as either a resource or learning strategy in an effort to make meaning therefore acquiring expertise as a reader or writer. Research on the intertextual connections made by readers has identified that good readers connect and relate ideas from current texts to past texts (Hartman, 1995; Lenski, 1998).

Research also identifies the ways that individuals make connections or gather meanings from various sources (Dickson, 1999; Kamberelis & Bovino, 1999; Lee, 2000; Lenski, 1998; Many, 1996; Mayo, 2000; McGinley, 1992; Pantaleo, 2006; Quinn, 2004; Rasinski et al., 2000). One example of an investigation into intertextual resources is Cairney's (1990) study which describes students independently using their intertextual histories when composing and comprehending texts. Based on classroom observation, he concludes that most readers are aware of the intertextual connections that they make. Moreover, he proposes that intertextuality is idiosyncratic, dependent on diverse factors such as text, purpose and context, linked with text features, and primed by specific elements of texts, such as content and plot (Cairney, 1992). For Cairney, the social nature of intertextuality means that teachers can have a "significant impact on building the intertextual histories of our students" (Cairney, 1992, p. 507). Thus, despite the idiosyncratic nature of intertextuality, there is educational value in building common intertextual links.

Building on this cognitive evidence, Lenski (1998) argues explicitly that in order to comprehend ‘at deeper levels’ students need to make intertextual links. She identifies a number of deeper processes that require intertextual links: synthesising knowledge, making comparisons, ‘storying’ (creating or re-creating other stories), integrating cultural knowledge and evaluating texts. Despite this, she argues, teachers use few instructional strategies which promote such linking. At the student level, studies have also shown that students can be encouraged to draw from their intertextual histories when making meaning and that intertextual resources can be provided that enhance meaning making (Chapman, 1995; P. Harris, et al., 2002; Irwin & Doyle, 1992; Jenkins & Earle, 2006; Kamberelis, 1999; Kamberelis & Bovino, 1999; Lenski, 1998; McGinley, 1992; Olness, 2006; Quinn, 2004; Rasinski, et al., 2000; Rief, 2003).

In summary, research suggests that instruction that explicitly teaches students to seek intertextual links would need to focus on the intertextual loop, building intertextual histories, on identifying prior knowledge of texts, and on discourse knowledge. By building joint intertextual history teachers might guide learners in developing resources for intertextual connections and deep comprehension. Through the explicit identification of intertextual connections educators might theoretically cue the prior learning relevant and necessary to make meaning in the current text. However, such identification would take cognisance of the divergent intertextual histories of participants in lessons, “The idiosyncratic nature of intertextuality requires the teacher to be flexible, to pick up on utterances and to be the bridge builder of connections to new learnings” (Roache-Jameson, 2005, p. 51). In the social environment of the classroom, teachers would be aware of the social stance, positioning and roles created by different intertextual links, and of their own intertextual agenda. They would also position both reading and writing

as inherently social acts. Despite such complexity, these are insights which potentially alter current practice in the teaching of writing.

Hence, theories of intertextuality from linguistic, social and cognitive research offer insights into the way intertextuality might be used in the classroom, identifying each of the levels that it connects to writing instruction. Therefore theories of intertextuality are a powerful vehicle for developing pedagogical content knowledge about writing at the textual, social and individual levels. Theories of the text offer resources for deconstructing texts and identifying the ways they work to achieve particular purposes, thus providing an opportunity for teachers to increase their personal content knowledge of texts. During instruction, teachers can use this tradition to examine the intertextual way in which texts may build on, refer to or resemble others. These theories intersect with social theories of learning which highlight the social and cultural nature of meaning negotiation, identifying that it is in the talk about text where much literacy is learned. From this social perspective, intertextuality offers insights into the social world of the classroom and the craft of the weaving of voices and histories of learners. Explicit intertextual linking in the social setting of the classroom potentially also creates a shared intertextual history, as learners identify, share and have affirmed their individual intertextual connections. Moreover, social theories illuminate the role of purposes and genre as tools to achieve social ends. In terms of the individual learner, explicit identification of intertextual links offers resources for learners, who can use this knowledge as a basis for further learning. Theories of intertextuality, therefore, offer teachers a resource for teaching and learning about texts, classrooms and learners.

3.7 The Facets of PCK for Writing Included in the Two Professional Development Types

It is argued here that professional development on the theories of intertextuality has potential to build pedagogical content knowledge for teachers. This relies on a belief that building pedagogical knowledge of teachers will result in refinements to classroom instruction, thus improving learning which, in turn, relies on a view of teachers as ‘adaptive’, and a belief that “existing knowledge and practices can be used as a lever for more effective practices” (McNaughton & Lai, 2008).

During the course of this project, teachers participated in professional development designed to raise their pedagogical content knowledge about writing through the identification of intertextual links. Hence, intertextuality was positioned as the aspect of pedagogical content knowledge, previously discussed, that Grossman (1990) described as ‘an overarching conception’. Using the asTTle assessment tool (University of Auckland, 2005b) as a starting point for the professional development, teachers read texts, both published pieces of writing and children’s work, and analysed these, developing the metalanguage necessary to identify features of the writing across texts and to judge children’s writing consistently with other teachers.

The marking rubric in the asTTle assessment tool formed the basis of the development of what Grossman (1990) referred to as curricular knowledge. It outlines the horizontal and vertical achievement indicators for seven purposes for writing (Persuade, Instruct, Narrate, Describe, Explain, Recount and Analyse), across dimensions of writing (e.g., Audience Awareness, Content, Structure and Language), which serve to cue particular relationships between texts. As an assessment tool, asTTle also offered diagnostic information about students’ writing, thus also supporting teachers’ analysis of

students' understanding, conceptions and misconceptions, which is another facet of pedagogical content knowledge (Grossman, 1990).

As part of the focus on intertextuality, teachers in both professional development groups read, discussed and critiqued research articles based on theories of intertextuality. They also analysed published texts of adult writers in order to discover the ways that these texts achieve rhetorical purposes, and were encouraged to make intertextual links to their own textual histories through talk about texts. They were asked to examine how they might draw on these links when composing texts of their own. It was hypothesised that teachers' increased understanding about textual features and intertextuality would result in increased achievement outcomes for children as a result of refinements to writing instruction in classrooms.

As discussed, the study was designed specifically to investigate whether differing types of intertextual linking, cued by either the horizontal or vertical axes of the asTTle assessment rubric, were more powerful than others in promoting transfer of learning, in this case of teachers' professional learning, between differing purposes for writing. For this reason, schools were assigned to one of two professional development groups. The first (GF) focused in detail on the intertextual links within one purpose for writing, that is, how texts written for a common rhetorical purpose are similar in the ways they achieve that purpose with respect to their 'dimensions' of writing (Audience Awareness, Content, Structure and Language). The second professional development group (DF) looked for intertextual links across writing for differing purposes, to highlight explicitly the ways in which texts could be compared as they work to achieve differing rhetorical purposes along each of the dimensions as mentioned.

3.8 Case Studies

In her characterisation of pedagogical content knowledge Grossman's final component is the instructional strategies and representations for teaching particular topics. While some of these have been outlined in the literature on intertextuality, as is commonly the case with research, studies offer more in the way of general principles than instructional designs. It was therefore up to teachers to incorporate the research into their own instruction. The nature of the refinements to instruction is illuminated in detail by the case studies of writing classrooms. Theories of intertextuality offer such conclusions as the need to talk about texts (Wells, 1990), to build students' intertextual histories (Cairney, 1992), to make the intertextual agenda explicit (P. Harris, et al., 2002). However, there is not an agreed approach as to how this might be done. Using the case study teachers as examples, ways that such theories might be used in practice in writing classrooms are described, by focusing on aspects of instruction that incorporate intertextual theories and identifying links and connections that teachers seek to make or allow students to make.

As international scholars have claimed (Hartman, 1992; Lenski, 1998) there are few well developed instructional strategies for making cross-text links and little curricular support for thinking about the relationships between texts. This is somewhat mirrored in New Zealand, where curricular support materials make reference to making connections and drawing on prior knowledge, however intertextual links are not mentioned (Ministry of Education, 2006a). Thus, the teachers in this study were the first to translate intertextual theories purposefully into classroom practice. These case studies teachers offered examples of instructional strategies and resources created to facilitate intertextual links. The hypothesis was, therefore, that the discussion of intertextual theories as part of the professional development would result in changes to pedagogy that allow for, or

encourage, students making and drawing on intertextual connections. The case study classrooms illuminate how teachers may draw on intertextual theories when designing and implementing instruction in writing.

In summary, the present study used intertextuality as an overarching conception from which to build teachers' PCK with a view to raising student achievement in writing. To avoid a narrowing of the writing curriculum the research question was intended to investigate how it might be possible to best design professional development so that teachers would transfer learning across a range of writing purposes. The two professional development interventions both focus on intertextuality, and are identical in all respects except the axis of the assessment rubric which was used as the basis for intertextual links (Genre Focus or Dimension Focus), and also the texts used as examples of these links. Student achievement data were collected and classroom observations were conducted to investigate the relative effectiveness of the two professional development types. Case studies were also employed to allow a detailed analysis of the ways in which teachers drew on the theories discussed when creating classroom writing programmes. Thus the study investigated two research questions:

1. What are the differential effects of the two professional development interventions, both focused on intertextuality but differing in terms of the type of intertextual links made?
2. What are the instructional strategies and representations for the teaching of writing made possible by using intertextuality as an overarching conception?

Chapter Four: Methods

The overall aim of the study was to design professional development in writing that would result in durable achievement gains in more than one purpose of writing. To this end, two potentially effective professional development interventions were designed, implemented and contrasted using both quantitative and qualitative sources of data.

4.1 Design

This study employed a concurrent mixed methods design (Johnson & Onwuegbuzie, 2004). It had a quantitative core and a simultaneous qualitative component. The quantitative core consisted of a longitudinal quasi-experimental design which was employed to compare two treatment groups (of schools) in terms of the student writing achievement. The qualitative component comprised four case studies of teachers, two from each treatment group.

The study was a direct comparison of the two types of professional development. Each of the schools participated in one of two professional development interventions in which teachers received the same amount of professional development, differing in terms of intertextual focus: a Genre Focus (GF) and a Dimension Focus (DF). The two interventions were compared in terms of the effects on student writing achievement outcomes. In order to create a situation where the interventions were directly comparable, participating schools were matched as closely as possible when being assigned to the professional development groups. The schools were comparable in terms of demographic information due to the fact that they all taught students from the same geographic community and were all state-funded. However, because there were a number of different types of schools serving the community, the two primary schools (Years 1 – 6) were

assigned to one group each, the two full primaries (Years 1 – 8) were assigned to a group each, and the intermediate (Years 7 and 8) and middle school (Years 7 – 9) were assigned to one group each, in order to evenly distribute the age of students in each group. In addition, two schools which shared a common site were assigned to the same group to allow for coherence within that site and to guard against diffusion of the different interventions.

The quasi-experimental design meant that both groups participated in a potentially effective intervention, thus there was no control group within the study who did not participate in any intervention. Ethically, this was deemed preferable to withholding professional development from schools, teachers and learners. The control is therefore estimated in two ways. The first estimation uses the schools' own baseline as the control, under the assumption that a trajectory determined by a cross-section of student achievement in the different cohorts at baseline measurement would be what could be expected had no intervention been implemented. Because of transience levels in the schools, this control measure needs to be checked for issues of selection bias when comparing the longitudinal cohort (those students who stayed in the schools) to baseline achievement (those who were in the schools at the initial testing point). Secondly, the asTTle assessment tool (University of Auckland, 2005) provides nationally normed achievement data. These serve to provide estimations of average achievement levels and progress rates for students nationally.

Classroom observations were conducted to collect quantitative data about the type of intertextual links made by teachers as part of the quasi-experimental design. However qualitative research methods were also employed to gain rich information about how the instruction in the two groups may have been influenced by the professional development

intervention. Four teachers and their classes participated in the research as case studies: one from each of the professional development types in each of the two years. Effective teachers were selected with the intention that descriptions of teaching would document the possibilities for teaching which specifically used intertextuality as a focus in the instructional programme. Thus, the focus for the study was the teacher, with concentration on the delivery of a writing programme in each of the participating classrooms.

The choice to use case studies was limiting in terms of generalisation, however they were included in the design in order to capture the way that teachers might teach a classroom programme based on intertextual theories. Currently in New Zealand, research suggests that intertextual linking is not something that teachers explicitly do in the 'average' New Zealand classroom (Parr & McNaughton, 2007). Therefore, the focus on intertextual links was an innovative approach to professional development, intended to raise student achievement based on the hypothesis that making explicit links between texts would raise achievement in both professional development groups. However, there are few experimentally proven methods for incorporating intertextual links in classroom programmes. For many teachers the implications of intertextual theories may have meant new approaches to teaching. Hence effective teachers were selected to be case study participants, based on the conception that those with existing effective programmes would be in the best position to make decisions about instruction that reflected theories of intertextuality.

Typically, writing in classrooms is not taught in discrete lessons, but unfolded in a series or as a 'unit', each lesson building upon the previous. Indeed, as has been discussed, intertextual theories are predicated on the dialogic nature of texts. In order to

capture intertextual links, particularly those that rely on shared intertextual histories built over the course of the unit or through participation in a shared learning community, it was necessary to see how these links were facilitated. It was possible, for example, that teachers made links through programme components that could not be observed through sampling of lessons. It was also possible, indeed likely, that intertextual links varied in either the type or the frequency day to day. The case studies were therefore included to document these. The case study component of the methodology was designed to explore the many intertextual dimensions of classrooms that may have been impossible to capture through sampled observations.

4.2 Participants

Six schools in Mangere, Auckland participated in the study. These schools had a history of operating as a professional learning community, and had been participants in previous research initiatives focused on improving student achievement in reading comprehension (Lai, et al., 2009).

All of these schools were situated in the same urban, high poverty neighbourhood (schools serving populations with the lowest socio-economic status are termed ‘decile one’ schools in New Zealand). All the schools catered for populations of diverse, predominantly Māori and Pacific Islands, ethnic backgrounds. Two of the schools were contributing primary schools with students from Years 1 – 6, two were full primary schools with students from Years 1 – 8, one was an intermediate school (Years 7 and 8) and one was a middle school (Years 7 – 9). The smallest school of the group had approximately 250 students; the largest had approximately 650.

Within the schools all teachers participated in professional development staff meetings as a school-wide commitment to professional development in writing. In total, 62 classroom teachers provided student achievement information in the first year, and 60 in the second: those teaching classes of students between Year 4 and Year 8. Additionally, school leaders, specialist teachers and junior school teachers all attended the professional development sessions in order to encourage coherence across the school.

Four teachers from the schools participated as case studies of teaching. These teachers were identified based on initial recommendations by school professional leaders, who were asked to nominate ‘an effective teacher of writing’. In particular, nominees were to be considered to have a high quality classroom programme and also accelerated student achievement, based on current school literacy assessments. This assessment was confirmed by consultation with researchers who had had previous experience with the cluster of schools. Finally, this was triangulated against the teachers’ writing moderation consistency scores (moderation procedures are detailed in Section 4.5) and current literacy measures (prior to the writing intervention).

The marking consistency scores were used as a general indicator as a check for pedagogical content knowledge about writing, in that these teachers understood and were able to use the assessment tool accurately and reliably. All the identified teachers had scores that indicated 80% agreement with the moderator prior to training, which suggested high levels of existing knowledge, as they could pick up an assessment tool and use the rubric without training. As requested, the participants were also all accelerating progress on current literacy measures (in Supplementary Tests of Achievement in Reading (Elley, 2001) average classroom progress in the four classes was between 0.2 - 1.3 stanines within the year). Once identified, these teachers were approached

individually and invited to participate. On one occasion the initial invitee declined to participate, and a replacement was found through the same process.

4.3 Data Collection

4.3.1 Student Achievement Data

Two purposes for writing were collected at each of four time-points. The ‘focus assessment purpose’, which was also the focus of the GF professional development (the DF professional development drew from a range of genre), was collected from all the students in the schools (Years 4 – 8). A different purpose for writing was additionally collected from a sample of students at the same four time-points. An overview of the data collection is shown in Table 4-1 and detailed below.

Table 4-1

Overview of Collection of Student Achievement Data

	February 2007	December 2007	February 2008	December 2008
All students (Years 4- 8)	Focus purpose: to recount		Focus purpose: to explain	
Sampling: (10% of students in Years 4 – 8)	Other purpose: schools’ choice		Other purpose: to recount	

The focus purpose for writing was collected by each of the schools as a usual part of the classroom assessments. In 2007, this purpose was ‘to recount’; in 2008 it was ‘to explain’. Repeated measures were collected at four time-points: February 2007, December 2007, February 2008 and December 2008. Data for this targeted purpose were collected from all students in the schools from the Years 4 – 8 cohorts.

In addition, a sample of writing in a different purpose was collected, consisting of no fewer than 10% of the students. In each year, this sample was randomly selected by the researcher. To ensure a sample of not less than 10%, four students in each class (of approximately 30 students) were selected, allowing for the historically expected student attrition rate of 25% in this group of schools. These 'sample' students (who also took part in the school-wide assessments) were tested in another writing purpose, which was not the focus of the school-wide assessment, in order to gauge whether students in the schools were also making gains in 'other' writing purposes. The same students were assessed at both time-points in 2007 on the same 'other purpose', thus allowing a comparison of the achievement gains in the focus writing purpose with gains in this other writing purpose. In 2007, schools had discretion over which 'other purpose' they would test the sample children in, with the stipulation that this purpose had been taught during the year. Thus, the 'other purpose' collected differed between schools in 2007 and included 'to persuade', 'to narrate' and 'to describe' writing assessments. These writing samples were collected in order to investigate the question of generalisation of learning: whether students were able to make accelerated achievement gains in other writing purposes covered by the schools within the year (but not the focus of school wide assessments).

In 2008 also, samples of assessments were collected for a second writing purpose. However, in this year, the sampled students were all tested in the 'to recount' writing purpose in all the schools. This sample in the second year was collected to ascertain whether durability of learning was affected by the professional development focus (at the beginning of that year), and whether any acceleration of learning in recount (theoretically due to the increased PCK of teachers) would be sustained in the second year when the school-wide assessment focus changed.

4.3.2 Classroom Observations

As part of the professional development intervention, classroom observation data were collected. The classroom observations had two main aims. The first, as a formative element of the professional development, was to support teachers' implementation of intertextuality as a focus for teaching. The second aim was to investigate differences between the intervention groups in terms of implementation. These observations were conducted as part of ongoing routine observations by school leaders but using a format designed by the researcher with input from the leaders (Appendix A). The teachers observed were those who would have been observed as part of routine observation cycles in the schools. The observations focused on the pedagogy, with particular reference to teachers attempting to show or make intertextual links. While school leaders may have taken the opportunity to discuss features of individual lessons and give feed-forward to teachers, data on these discussions were not collected. Instead the observation sheet asks for specific details as to the learning intention, grouping, type of lesson and activities within the lesson. It also asks leaders to record verbatim instances of intertextual links made by teachers.

To ensure consistency in the use of the observation sheet, leaders met and discussed examples of the sorts of links teachers might make in writing classrooms, as well as giving feedback about the clarity and usability of the format. To avoid issues of interpretation, leaders were asked to record verbatim instances and specific examples. In total, 22 classroom observations were collected in Genre Focus schools; 30 observations were collected in Dimension Focus schools.

4.3.3 Case Studies

Data on the case study teachers consisted of written observation and video-recordings of lessons over the course of a term of work along with final interviews of teachers. In the initial week of the case study, writing lessons were observed and written notes made. From the second week onward, lessons were video-recorded for each writing lesson in the unit of work taught by the case study teacher (i.e., ‘relief’ or replacement teachers were not recorded). These videos of the classroom attempted to capture the teacher, and focused on interactions with the teacher. Because units of work in writing were typically 10 weeks long each, the observations were considered to constitute “prolonged engagement” (Geelan, 2003, p. 16).

A research diary was also kept to record settings, context and observations. Along with informal conversations, an interview with the teacher was audio-recorded at the end of the unit. Three of the four case study teachers participated in the interviews; one participant declined to be interviewed at this point, but did agree to give feedback on initial drafts of sections concerning her teaching. These semi-structured discussions captured the teacher’s perspective when reflecting on the writing programme and provided corroboration of the video-recordings to strengthen the credibility of the data and also to provide for richer, thicker descriptions.

Case study data were collected from four teachers. Complete writing lessons were video recorded across a term for each of the teachers. The first of these observations was conducted in term three of 2007, the second in term four of that year, the third in term two of 2008, and the third in term three 2008. Student assent and parent permission was obtained so that children could be videoed in each of the classes. Where this was not

given, these students were identified and therefore not video-recorded. The students themselves were also conscious to remain out of video shot.

Due to school or student disruptions (for example classes being split to accommodate lack of relieving teachers), teacher illness, teacher classroom release or professional development, sports days, speech competitions, tests and other normal schooling interruptions, none of the classes was recorded as often as the number of planned teaching times. All cancellations of filming, except two, were at the request of the classroom teacher. In total 20 lessons were recorded for the first teacher, 28 for the second, 18 for the third, and 13 for the fourth. In each case, the first week of the term was not recorded, as teachers wanted time to ‘settle’ back into routines with their classes, and obtain the necessary permission from parents and assent from students. The first session with the researcher present was also not video-recorded, rather, time was spent recording field-notes in an effort to understand classroom routines and to memorise students’ names (particularly those not participating in the filming). The final week of the term was also not recorded as teachers considered these weeks to be ‘messy,’ with students devoting time to finishing or publishing work. Therefore, with filming occurring across a possible eight weeks, on average two to three classes per week were typically filmed (taught).

4.4 Measures

Student writing achievement was assessed using the asTTle (v4) assessment tool (University of Auckland, 2005b). This was the only assessment tool available to New Zealand teachers that provided norm referenced data about writing. Use of the tool potentially enabled robust data to be collected about the quality of students’ writing as it related to the national picture. In order to use asTTle effectively and reliably for data

collection purposes, the initial phase of the study needed to develop teachers' ability to assess writing reliably using the marking rubrics provided within asTTle.

In writing, asTTle enables teachers to assess students' learning in one of seven different purposes (Persuade, Inform, Narrate, Describe, Explain, Recount and Analyse). It also requires assessment of achievement on seven 'dimensions' of writing (Audience Awareness, Content, Structure, Language, Grammar, Punctuation and Spelling). In itself, this was the impetus for the schools' desire for professional development in writing, with a need to introduce teachers to the metalanguage used to describe the writing of students. Teachers quickly needed a knowledge of the way language works for particular purposes in order to identify language features in children's writing. This made asTTle a powerful tool for teachers' learning about language and texts (Parr, Glasswell, & Aikman, 2007). It provided a 'focusing phenomenon' based on which teachers could make intertextual links, for example, by identifying similarities and differences links between texts.

For this reason asTTle, and in particular the writing assessment rubrics, provided the basis for professional development, and indeed such professional development was necessary for teachers to use the tool successfully. The relationship between the assessment of writing and the development of expertise in teaching writing is an intentional feature of the development of the asTTle assessment tool, "The task was to develop rubrics that would both reflect and construct teachers' expertise in teaching writing as well as in assessing it" (Glasswell, et al., 2001). In this way, the asTTle provided an elegant intersection of two purposes of the project. It allowed measurement of children's achievement in writing in an ecologically valid way, as well as providing a curriculum-based platform on which to base professional development in the teaching of writing.

The scoring rubric associated with the writing purpose provided by the asTTle tool was used to assess the students' work. Thus, part of professional development programme for both the Genre Focus and the Dimension Focus was training in the marking and moderation of asTTle writing assessment procedures. Reliability of scoring was achieved through 'external' moderation with the researcher's scores. For professional development and as an effort to gain consistency within the school, teachers also met and conducted 'internal' moderation of their marking.

4.5 Reliability of Writing Scores

Reliability of writing scores constituted the focus of the first two workshops in the professional development programme in each year. Teachers were trained in the marking of writing in the first workshop and scores were moderated 'internally' in the second before scripts were collected and then moderated by the researcher. The moderation process began before professional development by establishing what teachers could already do without training. Participating teachers independently marked three samples from their classes (one high achieving, one average and one below expectations). These independent attempts served as a baseline for moderation results and as a guide for the training and moderation process needs in each school (see Table 4-2). The samples were collected and moderated. The teachers' and moderator's marks were considered consistent if they were identical or adjacent to one another. Overall agreement was therefore calculated according to the percentage of scores within one category of one another (G. T. L. Brown, Glasswell, & Harland, 2004). For this study, consistency levels were set at a minimum of 80% within each school to ensure that collected data were reliably marked. Therefore, the moderation process was an essential part of writing data collection at each time point. During the first moderation phase, schools who did not

reach criterion repeated the moderation meetings, and were required to remark tests to align with moderation feedback. Where this criterion was still not reached, individual teachers who were having difficulty were supported by school leaders in conjunction with the researcher to ensure that the marks entered by these teachers were ‘double checked’. In the initial stages, this required that the researcher mark papers and enter the data alongside the teachers concerned. At the final time-point, two schools each had a particular teacher who was having difficulty achieving the consistent marking criterion; in these instances the teachers concerned were ‘supported’ (i.e. marks were checked) by a team leader within the school who had high consistency levels with the moderator. Hence, by the end of the study schools had developed both expertise and processes to support moderation without the need for outside support.

Moderation was also undertaken for the ‘other purpose’ samples from the second time-point onwards. At the initial data collection time-point, teachers had not been trained to mark purposes other than that chosen for the whole school focus, so these samples for a second purpose were marked by the researcher. From the second time-point onward, the samples were collected and moderated as a professional development exercise for the teachers and as feedback to schools about teachers’ ongoing moderation needs (see Table 4-2). For data collection purposes, however, the researcher’s scores were recorded for the ‘other purpose’ samples to maximise consistency.

Table 4-2

Agreement between Teachers' and Moderator's Scoring of Scripts

School	Pre-intervention	Term 1 2007		Term 4 2007		Term 1 2008		Term 4 2008	
	Recount	Recount	Recount	Recount	Other purpose*	Explain	Recount*	Explain	Recount*
A (DF)	0.64	0.69	0.81	0.82	0.54	0.81	0.94	0.92	0.92
B (DF)	0.76	0.90	0.94	0.96	0.93	0.93	0.93	0.93	0.95
C (GF)	0.85	0.95	0.99	0.97	0.86	0.96	0.98	0.98	Unmarked scripts sent
D (GF)	0.85	0.82	0.83	0.63	0.84	0.87	0.80	0.80	0.95
E (GF)	0.75	0.83	0.97	Unmarked scripts sent	0.89	0.89	0.94	0.94	0.97
F (DF)	0.54	0.77	0.79	0.95	0.95	0.83	0.90	0.77	0.89

* Researcher's scores (as moderator) were used for these samples.

4.6 Data Analysis

4.6.1 Student Achievement Data

Student achievement data were collected as an electronic file exported from the asTTle programme. These data were then transferred into SPSS to allow for longitudinal tracking of students and statistical testing. These data were also analysed at each time point for feedback to the schools.

Analysis was conducted for each of the professional development groups using quasi-experimental logic, comparing the students who were present during the intervention to the expected trajectory for the groups provided by the cross sectional baseline for that group, which is the estimation of the expected trajectory for the students had no intervention occurred (e.g., Lai, et al., 2009). Because data were collected for four time-points, differing longitudinal cohorts were constructed, allowing analysis of the intervention within each year (Time 1 – 2; Time 3 – 4), of its resulting effects after a

summer break (Time 1 – 3) and also of effects for the students who were present for the whole intervention (Time 1 – 4). The interventions were compared with one another. Repeated measures ANOVAs tested for any differences in mean achievement and achievement gains over time between the students of the two groups of teachers. The interventions were compared with respect to their relative effects on the achievement of students in the focus writing purpose, in other writing purposes (generalisation of professional development) and also over time (durability of learning) for the students of each group of teachers.

4.6.2 Classroom Observations

Classroom observations were coded and entered into SPSS. Coding categories were developed which directly reflected the observation sheet (Appendix A), which was largely pre-coded. As such, specific codes indicated what the children were doing (planning/ crafting/ re-crafting or combinations of these), how learning intentions were shared (written/ oral or both), a description of the activities, levels of teacher support (shared/ guided or independent writing), and whether links of particular types were made (to other texts/ other genre/ previous learning/ other curriculum areas/ charts and signs/ to learning intentions and success criteria). Specific details were also recorded verbatim. To ensure coding reliability, 15% of the samples were coded by two researchers. Occasional disagreements between the coders occurred if there were issues of interpretation based on the verbatim examples. For example, ‘Who has heard of alliteration?’ was coded as ‘prior learning about writing’ by one coder, and as ‘prior knowledge/ experiences’ by the second. The inter-rater agreement between the two coders (agreements out of possible agreements) was 91%. Analysis compared treatment groups quantitatively, by

investigating the relative prevalence of particular features of lessons or intertextual links in the respective professional development groups

4.6.3 Qualitative Data Analysis

Initial data analysis focused on developing ‘thick’ descriptions (Geertz, 1973) of the classrooms involved, including classroom organisation, lesson formats and routines. Subsequent development of detailed coding reflected the research question investigating how the professional development on intertextuality might influence classroom writing programmes. For this reason, intertextual links were the focus of the coding. Codes were continuously developed and refined to reflect the data. Initial coding categories were built up from classroom observation, by recording any instances when a teacher made a link between two written texts. Based on these observations, it became clear that the definition of ‘text’ needed to be expanded to include links between activities and across time. This reflected the observation that texts were an inherent part of most classroom literacy activities, for example, when independent follow up work (usually creating a text) clearly operated as practice based on learning about a text in teacher-led sessions. Such links across activities and time were interpreted as a purposeful way of teachers linking texts in these classrooms.

Possibly because it was writing lessons that were being observed, it eventuated that all links were made with a view to children creating a written text. Thus, ultimately codes identified instances when texts were referred to as part of writing lessons. These instances were defined as intertextual links because two or more texts were explicitly referred to as being relevant to one another, that is, a text was discussed with reference to a student’s writing. Talk which was unrelated to a text, for example, behaviour management and organisational talk (such as, ‘Could someone please open the window?’)

were not coded. There were also many interactions that focused solely on a student's text that made no intertextual links (such as, 'Can you choose a better word here?', "What's your story about?"). Interactions that were not defined as an intertextual link were also not coded.

Classroom videos and teacher interviews were transcribed and subsequently coded by the researcher using NVivo 8 (QSR International, March 2008). It was necessary to code the transcriptions while simultaneously watching the videos. This allowed for more nuanced coding, and identification of links that may not have been apparent from written transcriptions alone. Segments for coding were defined as the total interactions that explicitly referred to another text (other than the child's writing). Segments were delineated by the interactions that continued to focus on these texts. It was often the case, for example, that a focus text was a background intertextual link for an entire lesson (for example when discussing a setting description in a focus text in order to write a setting for a narrative); however, while this was noted, only explicit references to the text were coded as intertextual links.

The identification of intertextual links through open coding created a long list of links that teachers could make, including: to published texts, to writing done in previous lessons, to other activities, to general knowledge, to future writing to their own previous work, to other children's work, to charts and signs and to texts read in previous sessions. These codes were grouped conceptually, and general categories emerged. These final categories reflected four axes of classroom textual interaction: cognition, texts, participation and time. Examples of each type of link and the overall framework are detailed in Chapter Six.

Following the development of the coding frame, its reliability was checked by a second coder. After an initial two hour training session, four meetings were held during the course of the coding to check for consistency of coding within a transcript and to identify potential sources of disagreement between coders. The greatest source of disagreement was not the type of link made, but inconsistent assignment of where intertextual links began and ended. Disagreements between coders on sample transcripts were identified and resolution of each instance was reached in order to develop shared understanding. In total 10% of transcripts were coded by two raters (excluding those scripts discussed by the raters). Agreement between the two coders was calculated in NVivo 8 using Cohen's kappa (κ), which takes into consideration the agreement occurring by chance based on likelihood of agreement if raters simply guessed (i.e., the possibility of chance is subtracted from both the numerator and the denominator in the equation of agreements out of possible agreements). The agreement between the two raters for those transcripts was $\kappa = 0.79$.

4.7 The Intervention

Teachers participated in a programme of professional development spread across two years as workshops and meetings. Schools were assigned to one of two professional development groups. While both were designed to build pedagogical content knowledge in the area of writing pedagogy, the first provided in-depth development in specific targeted writing purposes (GF); the second focused on intertextual links both across and within writing purposes (DF). Both interventions covered the same content, but differed in the scope of explicit intertextual references used as examples.

The structure of the asTTle assessment tool created a platform to investigate intertextual links. An asTTle test assesses seven purposes for writing (to persuade, to

instruct, to narrate, to describe, to explain, to recount, to analyse). Using individual rubrics for each purpose as guides to marking, the tool makes explicit one form of intertextual linking, that is, those links that exist between texts with similar purposes. It is on this basis that teachers commonly use the frameworks of the asTTle assessment tool in the classroom: in order to identify and teach the features of a writing ‘purpose’ (e.g., G. T. L. Brown, et al., 2004). In this sense the connections identified in instruction are between texts written for similar purposes (e.g., persuasive texts). Identification of these links formed the basis of the genre focused (GF) professional development.

Alternatively, it is possible to conceive of the rubric as offering a potential for writing analysis ‘across’ (as opposed to ‘down’) the rubrics by comparing genre with respect to the dimensions of writing. In the same way that a science workshop might focus on, say, respiration, across a range of organisms, writing pedagogical knowledge was developed using the dimensions of writing (e.g., Audience Awareness) to investigate explicitly the craft of writing with reference to the ways different texts work along these dimensions to achieve divergent purposes. This alternative to the ‘genre’ study allowed teachers to investigate one ‘dimension’ of writing, with respect to a variety of writing purposes, by explicitly identifying similarities, differences and links. Thus the DF professional development compared ‘attitudes to audience’, for example, using examples from differing genre.

4.7.1 Training and Moderation Workshops

The first workshop of each year was based solely around training teachers to mark using the asTTle assessment rubrics. At this session, the GF professional development group was trained using only the focus writing purpose (‘to recount’ in 2007; ‘to explain’ in 2008). The DF group was trained to mark students’ tests using asTTle generally. The

second workshop and additionally the final workshop of the year both focused on moderation of students' scripts between teachers. Moderation for both PD groups necessitated using the students' assessments; hence all teachers moderated the focus purpose for the year at the beginning and end of each year.

In moderation sessions, teachers at each of the schools met to moderate each others' scripts ('internal moderation'). Each teacher brought three scripts to these meetings (one high, one average and one low scoring script). To moderate a script, teachers, in pairs, marked one another's script 'blind'. They then compared marks and identified areas of disagreement. These 'disagreements' were resolved through discussion. Teachers then changed partners and repeated the process until all scripts had been moderated. These 'internally moderated' scripts then formed the basis for marking the rest of the tests. The 'internal moderation' was designed to facilitate conversations about features of students' writing and to ensure that teachers were able to assign marks using evidence from within the scripts. These internal moderation meetings were held prior to both the marking of the assessments and the 'external moderation' which formed the basis for the reliability of marking.

4.7.2 PCK Workshops

Following the two training workshops, four 'pedagogical content knowledge' workshops were delivered after school as staff meetings. In these meetings, the GF programme focused solely on the targeted purpose for writing: in the first year this was 'to recount'; in the second 'to explain'. In each session one dimension of this single writing purpose was discussed and analysed in detail. In the DF programmes one dimension (audience awareness, content, structure or language) was discussed and compared across a range of writing purposes.

No matter which professional development focus, the aim for both groups was to raise pedagogical content knowledge in writing, in order to improve student achievement. The vehicle used was the lens of intertextuality, but with a differing focus. As such, each session had a similar structure with three main components.

The first part of each session was a discussion of professional readings around writing and intertextuality (these are listed in Appendix B). Readings were assigned before each session, and teachers discussed these at the start of each workshop with particular reference to implications for instruction. These readings were common to both programmes, focusing on issues of intertextuality and the teaching of writing.

The second element of the workshop was a close reading of the asTTle indicators, and activities designed to assist teachers develop a deeper understanding of these. In the GF professional development group teachers looked closely at a single asTTle rubric; in the DF group the asTTle indicators were compared and contrasted along the particular dimension and teachers were asked to discern similarities and difference between the rubrics on that dimension.

Finally, a third component focused on intertextuality, in particular the similarities and differences between published written texts. Examples of writing from literature were discussed and analysed by teachers, exemplifying the metalanguage used in the asTTle indicators (showing, for example, an effective use of imagery, or language devices that add to the writer's purpose). In this third part of the session the GF group were given examples only from the targeted writing purpose; for the DF group the examples were drawn from a range of purposes for writing.

Following all the workshops for the year, the classroom observations (see Section 4.3.2) were conducted by school leaders. The student achievement data was sent to the researcher, who analysed trends for individual schools and also for all the schools combined. These results were offered as feedback to school leaders during the course of the intervention.

Chapter Five: Results of Student Achievement

This chapter summarises the results of student achievement data and classroom observations. Student achievement data were collected in order to compare the effects on student achievement of the two professional development types, both in the focus purpose for writing and in other writing purposes. Based on theories of transfer, it was hypothesised that in schools where the professional development focused specifically on one purpose for writing (GF), student achievement when writing for that purpose would be accelerated, but these gains might not necessarily be seen when students wrote for other purposes. In contrast, in schools where the professional development compared and contrasted writing purposes across the dimensions of writing, such as audience awareness, content, structure, language (DF), student achievement gains in a single writing purpose might be more limited by comparison, but might also be matched by greater gains in achievement when writing for other purposes.

To examine these hypotheses all students in both groups of schools were assessed on the respective targeted purpose for writing in 2007 and 2008. In the first year, all students were assessed on their ability to recount; in the second, they were assessed on their ability to explain. In addition to the school-wide testing, a sample of students (10%) was also assessed in a second writing purpose. For that sample, schools were asked to elect another purpose for writing which had been taught within the school in 2007 so that students' relative gains in another taught purpose could be measured. In 2008, schools were asked to assess a sample of students on their ability when writing to recount, in order to measure whether students continued to make gains in the previous year's assessed purpose.

Classroom observation data, gathered by the schools as part of the professional development, were also analysed. Although not comprehensive, these data enable a nascent understanding of how the different professional development foci might have resulted in different patterns of achievement, based on how the professional development was operationalised by the teachers in classroom programmes.

The results are therefore set out in four main sections. The initial section describes the student data collected, the measures used in the analyses, and the pattern of achievement at the beginning of the repeated measures: the baseline condition. The second compares relative achievement levels and gains between the two intervention types in each of the two years of the intervention, for both the writing purposes which were assessed school-wide and the sample of students' writing for other purposes. The third addresses the quasi-experimental design, comparing achievement within each of the two intervention types with baseline achievement. The final section considers classroom observation data, to get a sense of how the intervention types may have differed in terms of classroom practice.

5.1 Student Achievement Data

In total, student achievement data were gathered for 2335 students from six schools. One school was unable to send any data at the initial time point due to three successive burglaries of the school computers which meant that data were lost. As such, this school is not represented in the longitudinal analyses (Table 5-1). They are, however, represented in the analyses of the second year of the study (see Table 5-2). Therefore, in longitudinal analyses there are only two schools represented in the GF professional development group. The numbers of students represented by the data are shown in Table 5-2. Longitudinal cohorts have been defined as those students who have data for each

time-point up to and including the given time-point. Because the professional development took place over the course of two years, numbers of children in the longitudinal analyses vary due to student attrition and absence from school and the intake of new cohorts of students in the second year.

Table 5-1

Student Numbers in Each Participating School

PD Type	School	Overall Total	Time 1
	1 (Years 4 – 8)	513	330
	2 (Years 7 – 8)	373	231
Genre Focus	3 (Years 4 – 8)	331	0
	4 (Years 4 – 6)	376	199
	5 (Years 4 – 6)	321	191
Dimension Focus	6 (Years 7 – 8)	421	246
Total		2335	1197

Table 5-2

Student Numbers at Each Longitudinal Time-point

	Time 1 (Baseline)	Time 1- Time 2	Time 1 - Time 3	Time 1 - Time 4	Time 3- Time 4
Genre Focus	561	473	287	240	726
	636	488	259	230	523
Dimension Focus					
Total	1197	961	546	470	1249

At the initial time point, the students in both groups were 49% male and 51% female. The professional development groups were similar in ethnicity also. In the GF group, the main ethnic groups represented were Samoan (32%), Tongan (20%), Cook Island (16%), New Zealand Maori (19%), and other Pacific Islands (8%). All others, including New Zealand Europeans, made up 4%. In the DF group the students were also predominantly Samoan (32%), Tongan (25%) Cook Island (15%) New Zealand Maori (14%) and other Pacific Islands (6%), with all others totalling 8%.

5.2 Baseline Achievement across Year Levels

The baseline data, which provide a cross-section across year levels (see Figure 5-1), indicate differences between the two groups of schools in initial achievement levels, particularly in the Year 4 and Year 5 cohorts, with GF schools having lower initial achievement levels than the DF schools in these cohorts. In general, students at the schools in both professional development groups were achieving at levels below national norm achievement (see Table 5-3), particularly in the younger cohorts. Students in both groups were, however, making greater gains than those made in the national data, suggesting that the current teaching was already accelerating progress beyond average New Zealand progress. In terms of achievement level, however, students in all cohorts were achieving at lower levels than average New Zealand levels. These data are shown in Figure 5-1. They are illustrated here as line graphs (rather than more accurate representation of histograms) to represent the way they are interpreted: Cross sectional data are used in the analyses to represent the notion of generalised expected student trajectory across Year 4 to Year 8 before the intervention.

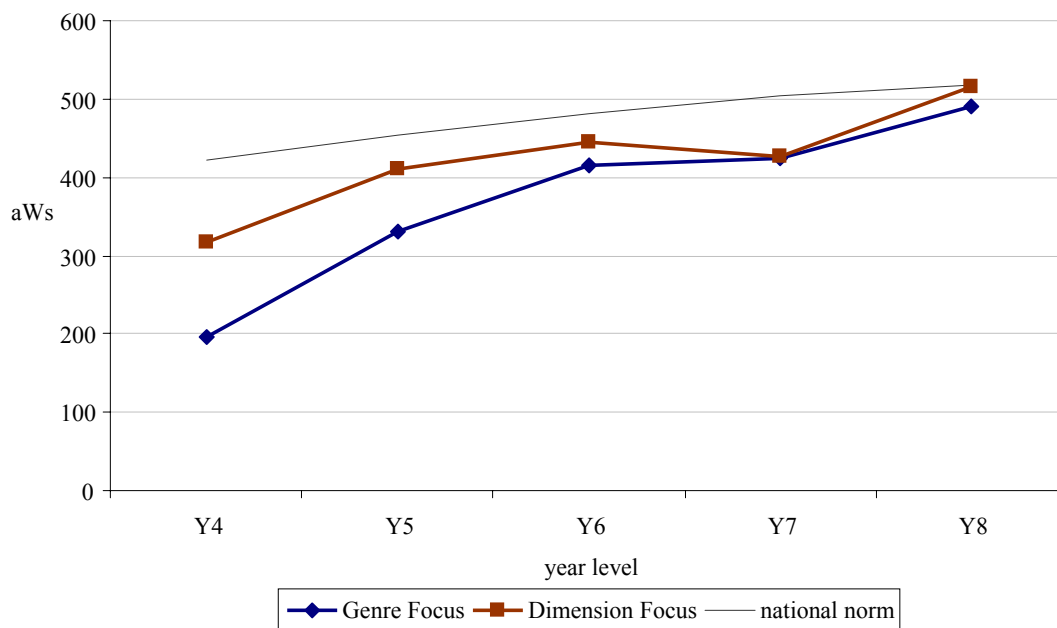


Figure 5-1. Baseline trajectory (aWs) for professional development schools.

5.3 AsTTle Writing Scores (aWs) and Difference from National Norm (DNN)

The data on writing can be reported in two different ways. Raw scores are reported in “asTTle Writing scores” (aWs). Generally, students in older cohorts have higher aWs than those in younger cohorts, so aWs are only used to compare students within a cohort. In order to compare scores across cohorts the raw scores have been transformed based on their difference from national norms, using the national mean scores for each cohort (see Table 5-3). Because normed data apply to the end of the school year, the end of year scores for a given cohort can be used as an estimate for the beginning of year scores of the following cohort (e.g., McNaughton & Lai, 2008). Thus, the Year 4 national mean score can be used as an estimate for Year 5 at the beginning of the year (Times 1 and 3).

The normative data provided by the asTTle tool show that different cohorts make, on average, differing amounts of gain in a year. These aWs gains along with the effect

sizes (using Cohen's d) of the gain at each year level are shown in Table 5-3. Because of this difference in average gains between year levels, in order to consider different cohorts on a common scale, students' aWs have been expressed as a difference from national means at their year level. This difference from national norm (DNN) shows achievement gains relative to the national data for each cohort, hence gains in DNN show progress beyond average national progress for that year level. For example, a student who begins Year 5 achieving 30 aWs points below national average (DNN = -30), but gains 30 asTTle points in Year 5 would still end the year 28 points below average (DNN = -28), as nationally students gain 28 aWs points from the end of Year 4 to the end of Year 5, thus the example student only gained 2 points more than average. In summary, students' raw scores are reported using asTTle Writing scores (aWs) and can be reported for individual cohorts; their scores relative to national data are expressed as a difference from national norm (DNN) and allow comparison across cohort groups using national data as a benchmark.

Table 5-3

National Norms (in November) for Writing Achievement at Each Year Level (University of Auckland, 2005b)

Year Level	Score	Gain	Effect size (<i>d</i>)
Year 4	454	28	0.28
Year 5	482	22	0.22
Year 6	504	14	0.14
Year 7	518	18	0.18
Year 8	536		

5.4 Differences between the Professional Development Types in the Initial Year (2007)

School-wide data for ‘recount’ in the initial year of the intervention show gains in achievement which exceeded mean national norm gains (Figure 5-2) for both intervention groups. To test for evidence of differences between the groups, repeated measures ANOVA were conducted using DNN scores of those students who were present for the duration of the intervention in the first year (Time 1 – Time 2 longitudinal cohort, see Table 5-2).

Non-significant between-subjects effects indicate that the professional development groups (PD type) were not significantly different in terms of achievement level. However both time and the interaction of PD type and time are significant, hence

the achievement gains in the professional development groups differ. Both groups changed significantly over time, but at statistically significantly different rates (see Table 5-4).

Table 5-4

Repeated Measures ANOVA (DNN) in the First Year ('to Recount')

Source ¹	<i>df</i>	<i>MS</i>	<i>F</i>		<i>p</i>
Between-Subjects					
PD type	1	31279.56	1.3		0.254
Error	959	(23029394)			
Within-Subjects					
time	1	1072586.4	222	***	0.000
time x PD type	1	112353.19	23.26	***	0.000
Error(time)	959	(4830.6)			

Note. Values enclosed in parentheses represent mean square errors.

¹ n = 961, see Table 5-2.

* $p < .05$. ** $p < .01$. *** $p < .001$.

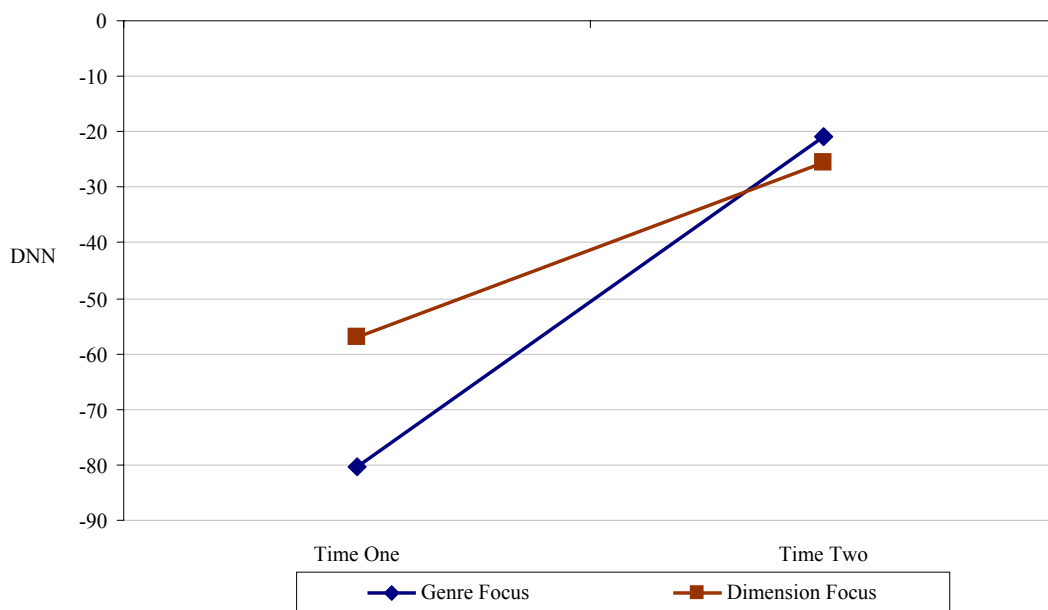


Figure 5-2. Mean DNN over the first year: 'To recount'.

Raw score achievement levels for individual cohorts in the two professional development groups are shown in Figure 5-3. Repeated measures ANOVAs for each cohort indicate significant difference in levels of achievement at Years 4 and 5; students in the DF schools achieved at higher levels in these cohorts. Nevertheless, time was significant for all cohorts, but the interaction of time and PD type was significant for three of the five cohorts (see Table 5-5). In these three cohorts, students progressed at different rates in the two professional development groups. In all three cohorts, students in the GF schools progressed at greater rates than those in the DF schools.

Table 5-5

Repeated Measures ANOVA (aWs) in the First Year ('to Recount').

Year Level	Source ¹	<i>df</i>	<i>MS</i>	<i>F</i>		<i>p</i>
Between-Subjects						
4	PD type	1	286449.6	16.61	***	0.000
	Error	104	(17246.07)			
5	PD type	1	252466.6	11.03	**	0.001
	Error	146	(22892.93)			
6	PD type	1	49362.61	2.18		0.142
	Error	169	(22676.45)			
7	PD type	1	29772.32	1.77		0.184
	Error	280	(16820.06)			
8	PD type	1	7741.71	0.29		0.591
	Error	252	(26780.67)			
Within-Subjects						
4	time	1	767396.43	114.43	***	0.000
	time x PD type	1	69996.43	10.44	**	0.002
	Error(time)	104	(6706.06)			
5	time	1	319456.55	93.04	***	0.000
	time x PD type	1	10396.9	3.03		0.084
	Error(time)	146	(3433.56)			
6	time	1	353053.41	92.33	***	0.000
	time x PD type	1	4.99	0		0.971
	Error(time)	169	(3823.67)			
7	time	1	358533.28	76.03	***	0.000
	time x PD type	1	36330.47	7.7		0.006
	Error(time)	280	(4715.68)			
8	time	1	231639.18	49.22	***	0.000
	time x PD type	1	130262.65	27.68	***	0.000
	Error(time)	252	(4706.56)			

Note. Values enclosed in parentheses represent mean square errors.

¹ n = 961, see Table 5-2.

* $p < .05$. ** $p < .01$. *** $p < .001$.

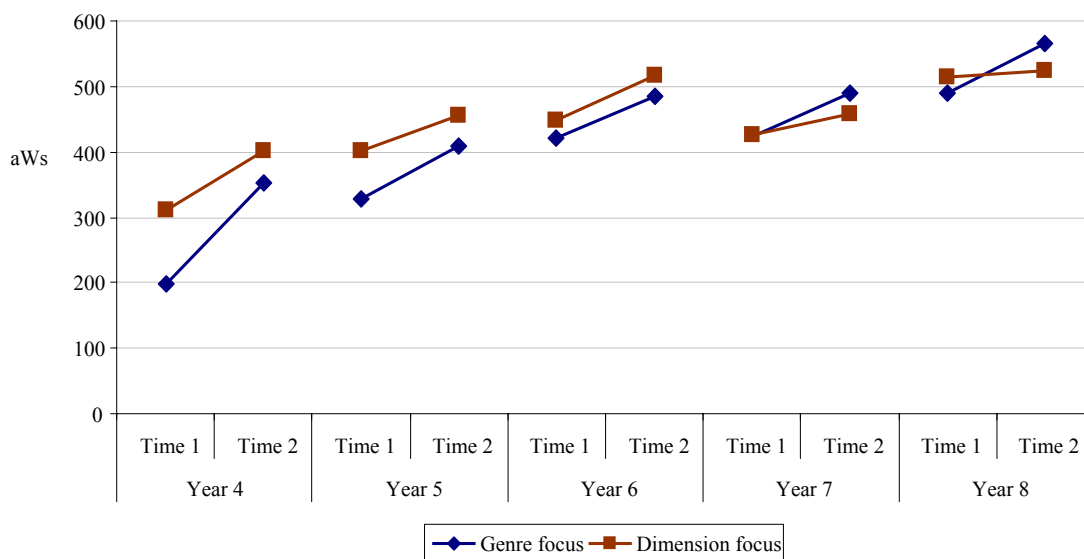


Figure 5-3. Mean aWs over the first year of each cohort: 'to recount'.

In summary, in the first year of the intervention, both intervention groups made gains greater than national averages when students were assessed on their ability to recount. Taken as a whole group, the gains made by the GF intervention schools exceeded those made by the DF intervention schools. These gains moved the GF group, on average, closer to national achievement (Figure 5-2) although this was largely due to the high achievement of the Year 8 students in GF schools (Figure 5-3) who, after the first year, left the intervention, and are therefore not included in longitudinal data beyond the initial year.

5.5 'Other Purpose' Sampling in 2007

During 2007, data on 'another purpose' for writing were collected in order to gauge the extent to which students were making progress when writing for purposes other than the focus purpose ('to recount'). These data represented a 10% sample of students' writing for a purpose, other than recounting, which had been taught within the year in the respective schools. Figure 5-4 illustrates the average DNN in these other purposes for

both groups. Unlike the results for the ‘to recount’ purpose, the GF schools achieved at slightly higher levels than the DF schools. Students in GF schools then also progressed at greater rates, with the students in the DF schools progressing at rates less than national average in these ‘other purposes’. Repeated measures ANOVA indicate that the interaction of time and PD type is significant (Table 5-6). These differences are clear in Figure 5-4.

Table 5-6

Repeated Measures ANOVA for DNN (sampled) over the first year (‘other purpose’).

Source ¹	<i>df</i>	<i>MS</i>	<i>F</i>		<i>p</i>
Between-Subjects					
PD type	1	100926.1	6.53	*	0.012
Error	125	(15445.03)			
Within-Subjects					
time	1	18575.17	5.48	*	0.021
time x PD type	1	50637.78	14.93	***	0.000
Error(time)	125	(3391.3)			

Note. Values enclosed in parentheses represent mean square errors.

¹ n =127, n (GF) = 71, n (DF) = 56.

* $p < .05$. ** $p < .01$. *** $p < .001$.

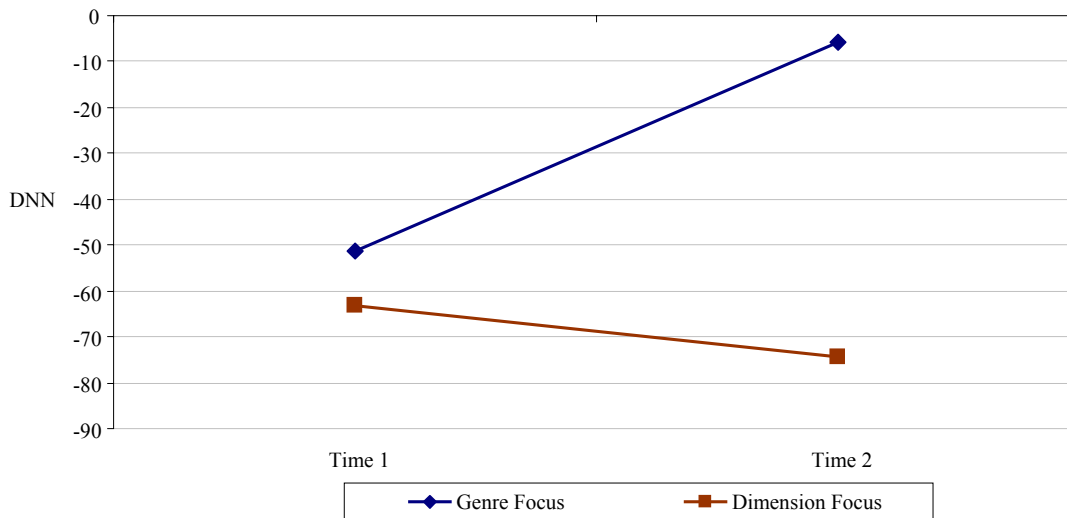


Figure 5-4. Mean DNN (sampled) over the first year: 'other purpose'.

When analysed in terms of raw scores at the cohort level (Table 5-7), it is clear that the significant interaction difference occurred in the Year 7 and 8 cohorts (Figure 5-5). In the DF professional development group, these students were all in a single school, making it tempting to posit alternative explanations for the losses at this particular school. However, the fact remains that, unlike the GF group where average achievement increased for all year levels, two cohorts within the DF intervention made losses in achievement when writing for other purposes. Because schools chose which purpose to assess in the initial year, the 'other purpose' collected varied between the schools. However, as a coincidence, all the students sampled in all the schools at Year 7 and Year 8 were assessed on the 'to persuade' writing purpose. For this reason, the direct comparison between the two groups at these year levels is particularly striking (Figure 5-5).

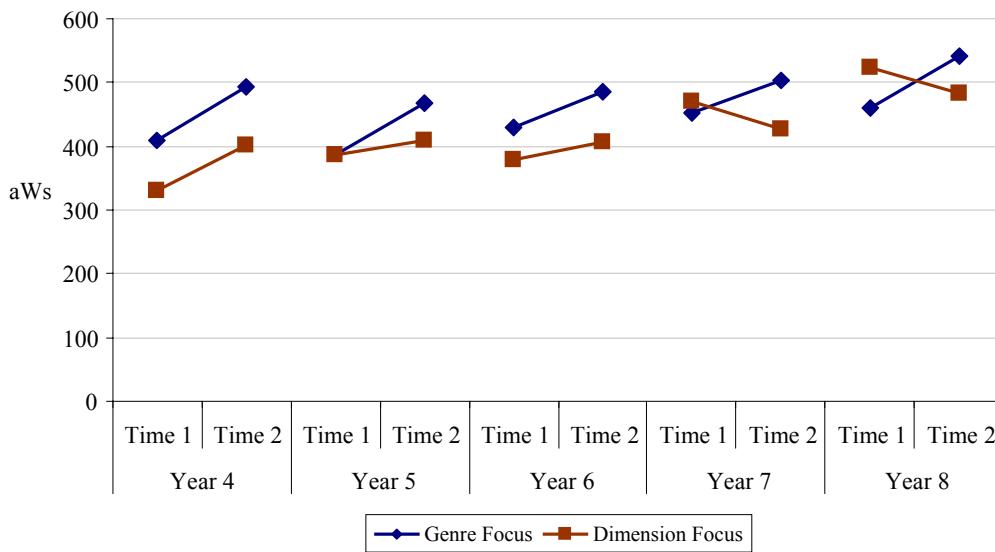


Figure 5-5. Mean aWs (sampled) over the first year: 'other purpose' across Year Levels.

Therefore, given the nature of the data at Years 7 and 8 a cautious interpretation of the results is warranted. This would indicate that the professional development intervention focused on a single genre (GF) did not result in comparatively less learning for students when writing for other purposes, as was initially hypothesised. Thus it seems achievement results from a GF professional development focus can transfer to other writing purposes, theoretically due to increases in teachers' PCK which transfer to teaching other writing purposes.

Table 5-7

Repeated Measures ANOVA for aWs Over the First Year ('Other Purpose')

Year Level	Source ¹	<i>df</i>	<i>MS</i>	<i>F</i>		<i>p</i>
Between-Subjects						
4	PD type	1	46543.62	7.00	*	0.021
	Error	12	(6649.28)			
5	PD type	1	10250.73	0.55		0.467
	Error	23	(18700.68)			
6	PD type	1	41347.67	2.13		0.161
	Error	19	(19399.49)			
7	PD type	1	14835.84	1.31		0.259
	Error	36	(11285.95)			
8	PD type	1	117.5	0.01		0.941
	Error	27	(21057.9)			
Within-Subjects						
4	time	1	40120.71	9.76	**	0.009
	time x PD type	1	31	0.08		0.787
	Error(time)	12	(4109.5)			
5	time	1	31949.71	13.76	**	0.001
	time x PD type	1	9177.87	3.95		0.059
	Error(time)	23	(2322.5)			
6	time	1	18517.91	6.98	*	0.016
	time x PD type	1	2020	0.76		0.394
	Error(time)	19	(2652.24)			
7	time	1	293.04	0.08		0.774
	time x PD type	1	36106.09	10.29	**	0.003
	Error(time)	36	(3510.49)			
8	time	1	4557.56	1.25		0.273
	time x PD type	1	44298.25	12.17	**	0.002
	Error(time)	27	(3639.05)			

Note. Values enclosed in parentheses represent mean square errors.

¹ $n = 127$, n (GF) = 71, n (DF) = 56

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

5.6 Achievement in the Second Year

In the second year of the intervention, school-wide data were collected for the new focus writing purpose for assessment, ‘to explain’. Analyses of students’ DNN for those students who were still present for the intervention in the second year (Time 1 – Time 3 longitudinal cohort), show that both professional development groups made some losses in achievement at the beginning of the new school year (Figure 5-6). Time was statistically significant for both professional development groups as was the interaction between PD type and time (Table 5-8). Thus, achievement levels within the professional development groups fell at different rates between the end of the first year and the beginning of the second.

Table 5-8

Repeated Measures ANOVA for DNN from the end of 2007 to the beginning of 2008 (‘to explain’)

Source	<i>df</i>	<i>MS</i>	<i>F</i>		<i>p</i>
Between-Subjects					
PD type	1	8.83	0.00047		0.983
Error	544	(18822.46)			
Within-Subjects					
time	1	67753.33	12.14	**	0.001
time x PD type	1	36882.64	6.61	*	0.01
Error(time)	544	(5579.89)			

Note. Values enclosed in parentheses represent mean square errors.

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

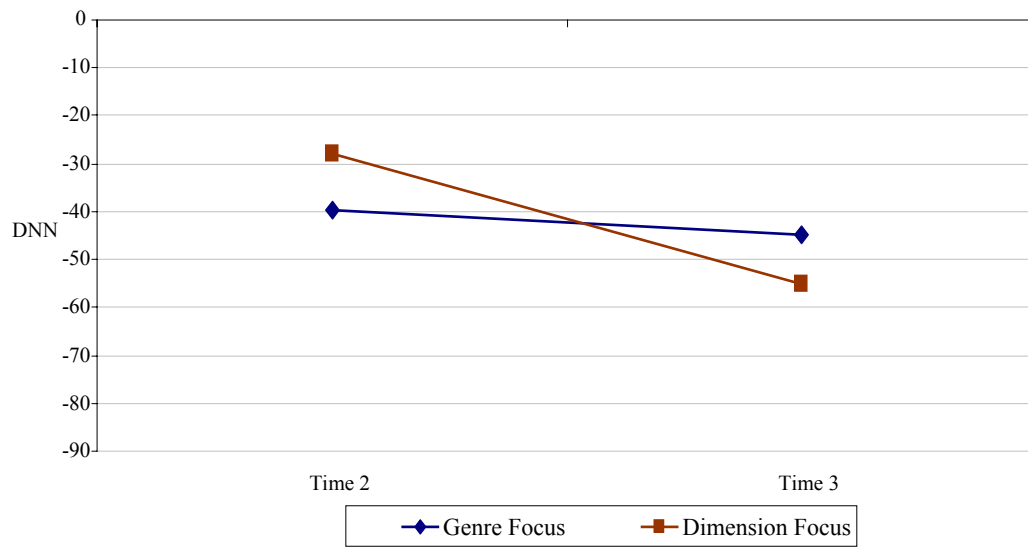


Figure 5-6. Mean DNN from the end of 2007 to the beginning of 2008 ('to explain').

Table 5-9

Repeated Measures ANOVA for aWs from the End of 2007 to The Beginning of 2008 ('To Explain')

Year Level	Source	<i>df</i>	<i>MS</i>	<i>F</i>		<i>p</i>
Between-Subjects						
4	PD type	1	15346.37	0.87		0.353
	Error	86	(17590.6)			
5	PD type	1	41190.8	2.13		0.147
	Error	122	(19331.78)			
6	PD type	1	97594.03	6.34	*	0.014
	Error	79	(15390.6)			
7	PD type	1	52076	2.81		0.095
	Error	250	(18518.35)			
Within-Subjects						
4	time	1	242.94	0.05		0.829
	time x PD type	1	49580.64	9.62	**	0.003
	Error(time)	86	(5153.14)			
5	time	1	1053.56	0.24		0.623
	time x PD type	1	42661.94	9.82	**	0.002
	Error(time)	122	(4345.05)			
6	time	1	317885.2	92.93	***	0.000
	time x PD type	1	107395.23	31.4	***	0.000
	Error(time)	79	(3420.54)			
7	time	1	12956.58	2.36		0.125
	time x PD type	1	25002.52	4.56	*	0.034
	Error(time)	250	(5482.17)			

Note. Values enclosed in parentheses represent mean square errors.

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

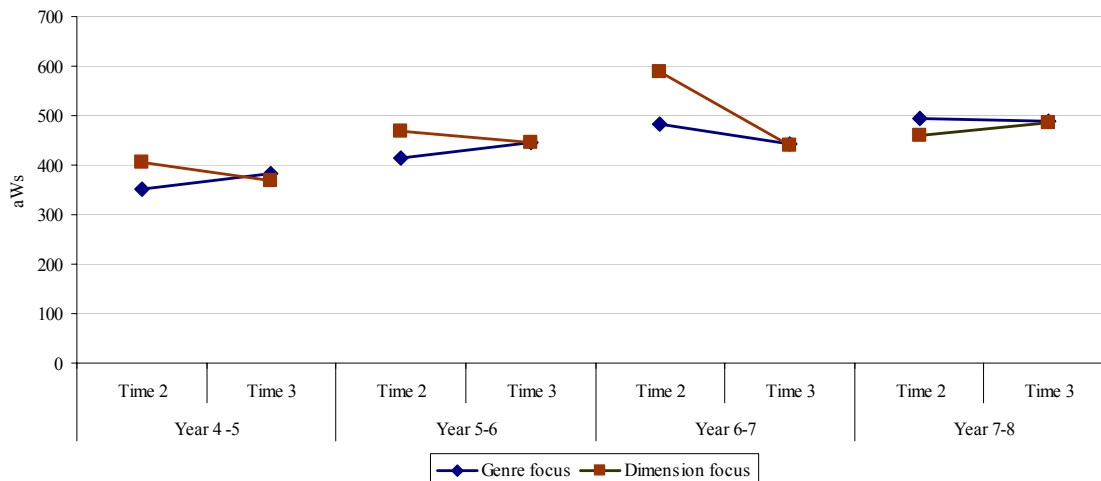


Figure 5-7. Achievement from the end of 2007 to the beginning of 2008 for each cohort within the two intervention types.

When analysed at a cohort level it can be seen that differences in attainment between the professional development types at the end of 2007 had generally balanced out at the beginning of 2008 (Figure 5-7). The interaction between time and PD type was significant for all cohorts (Table 5-9). There are two possible explanations for why the intervention groups might have made losses of differing size across these time-points. The first is that the effects of summer impacted differently on students in the two professional development groups, particularly in the Year 5 to Year 7 cohorts (potentially due to differences in durability of the learning). The second explanation is that the differences had little to do with summer; rather they reflected a potential difference in students' writing ability across writing purposes in the two professional development groups. Simply put, students in one group of schools may have been taught how 'to recount' well, potentially at the expense of other purposes for writing. This would then show up in the data when a different purpose was assessed ('to explain' was the focus for assessment in 2008).

In order to separate the issue of durability of learning over summer from the change in writing purpose, a 10% sample of students was assessed on the ability to recount (the same purpose as the previous year) during 2008. To identify the durability of learning in the 'to recount' purpose, this sample of students' scores from the previous year were identified. Figure 5-8 compares the recount scores for the sampled children across the course of the intervention with the whole school data which represent a change in purpose for assessment. While both intervention groups made losses over summer in school-wide assessments, the sampled students of both groups, who wrote for the same purpose either side of the summer break, maintained their respective scores in recount. There were no significant differences in gains between the groups of sampled students either across the change in school year (Time 2 – 3, PD Type*time, $F(1,80) = 0.055$ $p = 0.81$) or during 2008 (Time 3-4, PD Type*time, $F(1,82) = 0.726$ $p = 0.397$). Indeed, the pattern, in both groups of students tested on the same writing purpose, is a plateau (illustrated in Figure 5-8). Thus, this purposeful sampling indicated that the drops over summer were most likely associated with the change in writing purpose.

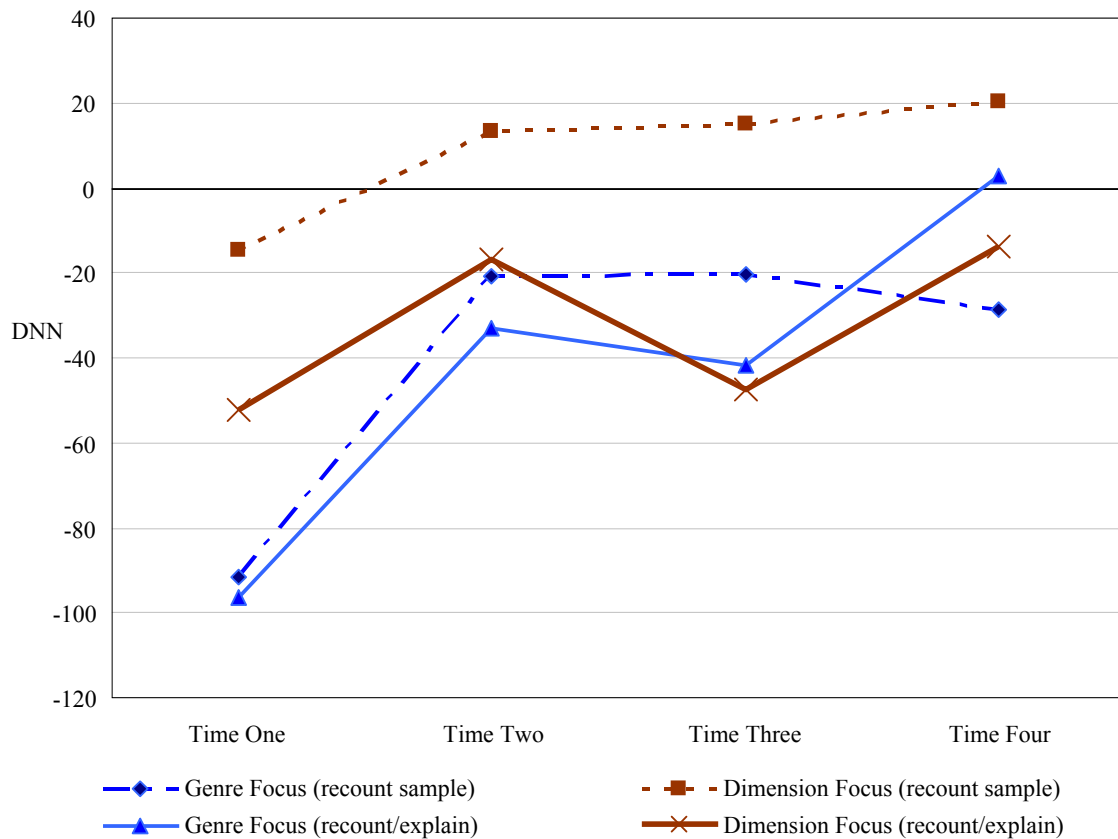


Figure 5-8. Mean DNN over two years in both the main focus (to recount/to explain) and recount sample (to recount/to recount).

In the second year of the intervention, results for the ‘to explain’ purpose indicated greater similarity between the professional development groups in terms of both achievement levels and gain. Both groups made accelerated progress as compared to national norms (Figure 5-9). While time had a significant effect (Table 5-10), there was no interaction between time and PD type showing that in 2008 the progress was similar for both intervention groups. Analysis of the raw score gains (Table 5-11) showed some differences between some cohorts, but no clear trend in favour of either professional development group (Figure 5-10).

Table 5-10

Repeated Measures ANOVA for DNN within the Second Year ('To Explain')

Source	<i>df</i>	<i>MS</i>	<i>F</i>		<i>p</i>
Between-Subjects					
PD type	1	131573.9	6.48		0.011
Error	1247	(20305.44)			
Within-Subjects					
time	1	760643.5	174.65	***	0.000
time x PD type	1	875.58	0.2		0.654
Error(time)	1247	(4355.22)			

Note. Values enclosed in parentheses represent mean square errors.

* $p < .05$. ** $p < .01$. *** $p < .001$.

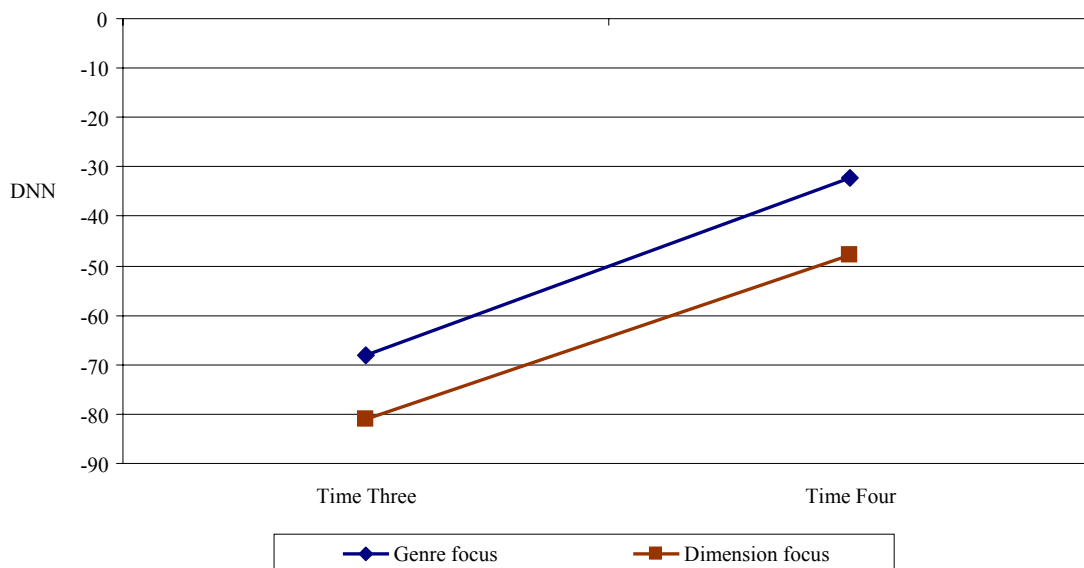


Figure 5-9. Mean DNN over the second year 2008 ('to explain').

Table 5-11

Repeated Measures ANOVA aWs within the second year ('to explain')

Year Level	Source	<i>df</i>	<i>MS</i>	<i>F</i>		<i>p</i>
Between-Subjects						
4	PD type	1	20066.63	1.7		0.193
	Error	222	(11791.26)			
5	PD type	1	13125.81	0.74		0.392
	Error	237	(17820.97)			
6	PD type	1	1766.67	0.1		0.752
	Error	223	(17697.31)			
7	PD type	1	1992.12	0.09		0.759
	Error	230	(21095.4)			
8	PD type	1	125164.43	5.74	*	0.017
	Error	327	(21816.72)			
Within-Subjects						
4	time	1	243998.13	85.55	***	0.000
	time x PD type	1	14822.63	5.20*	*	0.024
	Error(time)	222	(2852.06)			
5	time	1	349014.31	81.41	***	0.000
	time x PD type	1	49125.67	11.46	**	0.001
	Error(time)	237	(4287.18)			
6	time	1	266529.46	71.47	***	0.000
	time x PD type	1	4689.46	1.26		0.263
	Error(time)	223	(3729.49)			
7	time	1	428100.65	102.72	***	0.000
	time x PD type	1	2341.5	0.56		0.454
	Error(time)	230	(4167.48)			
8	time	1	319930.07	59.12	***	0.000
	time x PD type	1	32331.65	5.97	*	0.015
	Error(time)	327	(5411.89)			

Note. Values enclosed in parentheses represent mean square errors.

* $p < .05$. ** $p < .01$. *** $p < .001$.

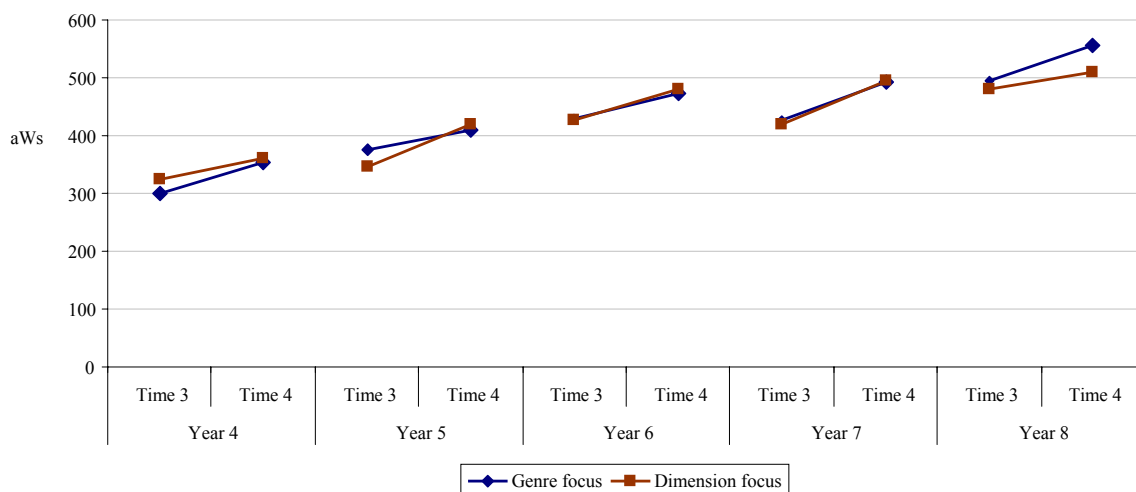


Figure 5-10. Mean aWs within the second year ('to explain').

5.7 The Quasi-experimental Design

While the previous analyses compared the two intervention types, they can each only be considered educationally effective if achievement in those schools is improved compared with the situation had the intervention not taken place. This is the logic of the quasi-experimental design. The effectiveness of the two interventions was therefore tested by comparing achievement levels of students at the baseline time point with achievement levels after the intervention. Using this logic, the baseline achievement is used to approximate a trajectory of achievement had the intervention not occurred.

Issues of selection bias arise from student absence and transience. The method of analysis rests on the assumption that nothing changes in the schools other than the intervention. A threat to the validity of the analyses may arise if the substantial numbers of students who leave across the time of the intervention or who are absent for testing and 'catch-up' testing have differing achievement levels than those who stay. Were this the case, it is possible that the intervention would look successful when measured against baseline achievement, simply by virtue of tracking non-transient achievement compared

with baseline achievement. Thus, independent samples t-tests were used to compare achievement of the baseline cohort (which provides an estimate of a control group, see Figure 5-11) with the initial achievement of the longitudinal cohorts to see whether their initial achievement levels varied.

The comparison showed no evidence of a statistically significant difference between the achievement of all the students who were present at baseline and the initial achievement of those who remain in the intervention at any other time-point (Table 5-12).

Table 5-12

Mean DNN Scores at Time 1 for Baseline Students and Each Longitudinal Cohort

PD Type	Baseline cohort	T1-T2 Longitudinal cohort	T1-T3 Longitudinal cohort	T1-T4 Longitudinal Cohort
GF	-81.35	-80.24	-98.14	-96.49
DF	-58.60	-56.97	-62.67	-52.44

5.8 Comparison with Baseline Data

As discussed, the pattern in the cross-sectional baseline data (Figure 5-1) suggested that even before the intervention the schools were making greater than expected progress, in that students were approaching the means of the norm data as the cohorts got progressively older within the schools. Figure 5-11 illustrates the achievement over the course of the two year intervention for both intervention groups compared with their own baseline data. It shows increased progress for both intervention groups within each of the

school years, but highlights the threat to the achievement of students between the end of the first year and the beginning of the second (Time 2 – Time 3), particularly in DF schools. As discussed, the recount sampling done in the second year suggested that this dip was due to differences in attainment when students were assessed in a different purpose for writing.

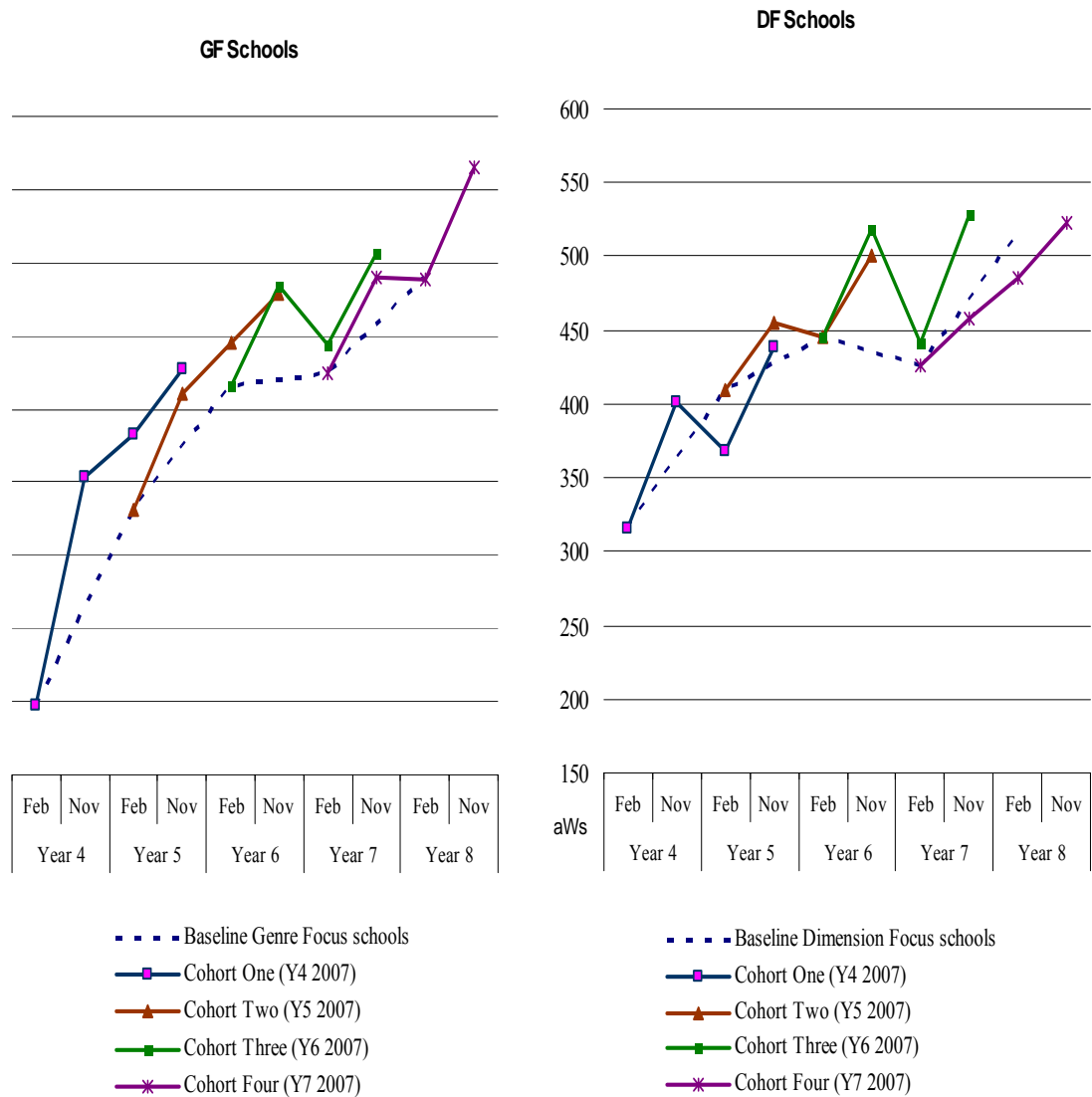


Figure 5-11. Mean aWs of each cohort over time (Time 1-4) compared with respective baselines.

Figure 5-12 illustrates the size of the difference in school-wide assessment data between baseline achievement and achievement at Time 3, after one year of the intervention (effect sizes for these differences are shown in Table 5-13). The results particularly emphasise the relative underachievement of students in the DF schools when writing to explain, compared with when writing to recount. Largely, however, these students recovered lost ground, and made accelerated gains again in the second year of the intervention (Figure 5-11). Nevertheless, when viewed longitudinally, the loss over summer in DF schools represented a threat to students' trajectory, which was not as evident in GF schools' patterns of achievement, particularly in younger cohorts.

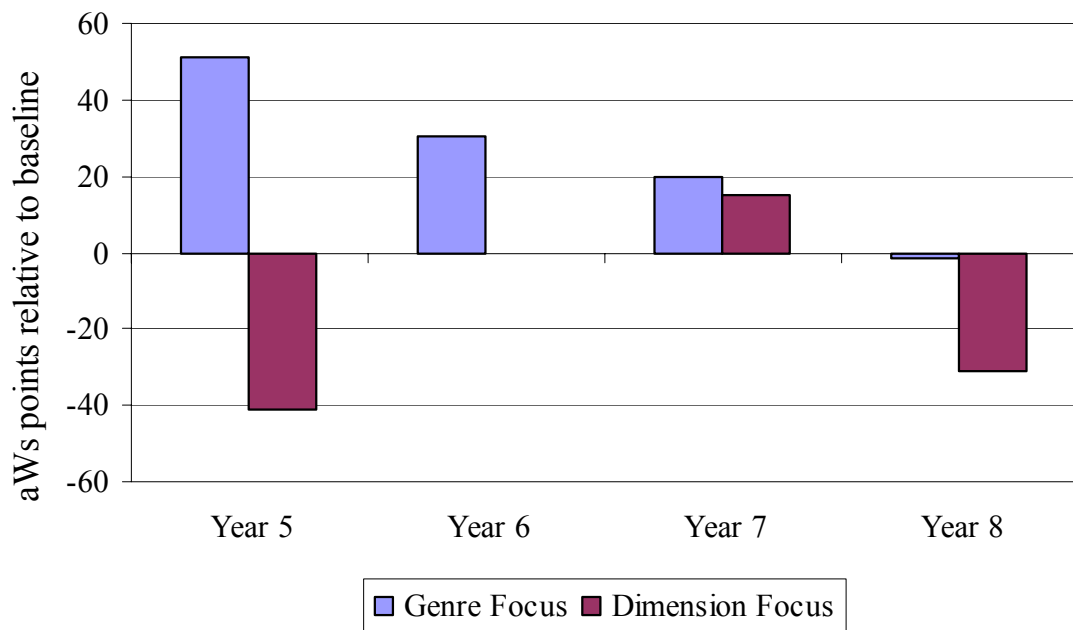


Figure 5-12. Achievement at Time 3 (Time 1-3 longitudinal cohort) compared with respective baselines (Note that the Year 6 Dimension Focus value is -0.46)

Table 5-13

Effect sizes of the interventions compared with baseline achievement

		Cross sectional cohort			T1-T3 cohort			<i>t</i>	<i>p</i>	<i>d</i>
		(control)			(treatment)					
		<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>			
GF	Y5	70	331.73	121.78	32	383.09	68.26	2.72*	0.008	0.48
	Y6	64	415.50	94.68	51	445.90	92.69	1.73	0.086	0.33
	Y7	204	424.34	111.06	53	441.23	110.97	0.99	0.325	0.15
	Y8	165	490.46	140.03	158	488.77	114.66	0.12	0.906	-0.013
DF	Y5	119	409.96	128.85	57	368.70	129.35	1.98*	0.049	-0.32
	Y6	132	445.90	128.28	73	445.44	128.51	0.02	0.980	-0.004
	Y7	119	426.13	76.86	29	441.41	88.08	0.86	0.392	0.193
	Y8	123	515.59	107.29	100	484.83	97.05	2.25*	0.026	-0.30

*** $p < .001$, ** $p < .01$, * $p < .05$.

In summary, comparison between the two intervention types shows greater gains in the first year for the GF professional development group both in terms of school-wide assessment of writing to recount and a 10% sample of writing for a different purpose. Comparison between the intervention groups also shows that the GF professional development group dropped less when assessed on a differing writing purpose in the second year. The professional development groups made similar gains in the school wide assessment in the second year. Sampling in recount in the second year shows that learning to write to recount was durable for both intervention groups across the summer school break. In addition, comparison with the groups' respective baseline data indicates that the differential attainment between writing purposes presented a threat to the trajectory of students in the DF schools.

These data underline the importance of capturing information about more than one purpose for writing. Clearly, the extent to which students are prepared to write for a variety of different purposes differs, as does the emphasis that schools place on assessment in the targeted purpose for assessment at the expense of other purposes for writing. While greater gains for the GF intervention type may have been expected when students were assessed in that specific genre, students in the GF schools were as prepared, if not more so, as students in the DF schools to tackle assessment in writing for differing purpose in the new school year. Therefore, in contrast to the initial hypothesis and despite receiving professional development only based on recount, teachers in these GF schools were able to generalise their practice in such a way that students' learning in other purposes for writing was also accelerated. The classroom observation data enabled investigation of whether these differences were the result of different applications of the two types of professional development in classrooms.

5.9 Classroom Observations

Classroom observation data were collected from 22 classrooms in GF schools and 30 classrooms in DF schools as part of the normal formative observation cycles in those schools. Although largely conducted for the purpose of in-school formative feedback for teachers, they were designed to capture information about the types of intertextual links that teachers were attempting to make as part of writing instruction (see Appendix A). As such, they are an indication of the way teachers were delivering instruction in writing in the two groups of schools. The sample of both professional development groups indicated that there were few differences between the groups either in terms of the way the teachers organised their writing programmes or in the types of links they made for children. It was clear that all observed teachers focused on a particular purpose for writing, in a 'writing

unit' fashion whether they participated in the GF or DF professional development. There were no lessons observed where various students were writing for differing purposes around a theme (in a "multigenre" approach (Allen, Swistak, & Smith, 2004)) or were working on self-chosen purposes for writing, for example.

Teachers in both professional development groups used a mixture of contexts for the teaching of writing, most commonly a mixture of whole class and group teaching approaches, using shared or guided writing lesson formats. The use of focus texts was apparent in nearly all lessons for each of the professional development groups, characterised by discussion, use of meta-language, and explicit teaching of language features. In the GF schools, 90% of lessons revolved around a focus text; in the DF schools a similarly high number of writing lessons involved a focus text (87%). In both professional development groups these focus texts were mainly published texts or teacher-prepared texts (often referred to as a 'model'). These were most often used as exemplars or mentor texts in order to illustrate the features often found when authors are writing for particular purposes.

As part of the observation, school leaders were asked to record whether the teacher encouraged students to talk about texts, and to record which particular text was the focus of a lesson. In both professional development groups there were also high levels of class or student 'discussion' around texts (80% of lessons in each group featured discussion around texts). Specific examples related to 'talk about texts' and 'text focus' indicate that teachers usually led the interactions around texts through questioning in class or group 'discussions'. They also physically controlled the focus text, using a single 'model' displayed from the teaching station. In the odd notable example students were involved in their own text analysis, working in groups and discussing text features. For

example, in one classroom observation the children were involved in a writing unit focusing on explaining. As part of the observed lesson the children worked in groups, with a highlighter pen, around an A3 photocopy of an explanation found in the School Journals (published by Learning Media for the Ministry of Education). The lesson focus was on ‘expanding our ideas’ and, in the first portion of the lesson, children highlighted the main idea in paragraphs from the explanation, noting the details and the way ideas were expanded in the text. Following up this activity, the children edited their own paragraphs around their current theme by identifying their main ideas and then ‘expanding’ these by adding details. Examples of talk about texts in this lesson were direct child to child interactions around a read text, with a class discussion which served to synthesise children’s responses.

Teachers in both professional development groups made explicit intertextual links between texts in a number of ways. Firstly teachers from both groups (77% of the GF group and 83% of the DF group) offered support to writers by making links to charts, signs and models in the classroom environment, often by reminding children to use these forms of support. These were commonly word families or synonym charts or writing frames and exemplars.

Two types of links to students’ prior knowledge were also made. The first was by asking children if they had previous experience or knowledge of an aspect under discussion. In the GF group 73% and in the DF group 70% of teachers made this type of link to students’ individual intertextual histories, explicitly asking about either children’s prior experiences (e.g., asking who had been to the beach) or prior textual experiences (e.g., asking students who had seen a Haiku before). The second link to prior knowledge was a prompt to remember some aspect of previous learning that the teacher knew the

children had experienced. This constituted a link to the shared intertextual history of the class. Nearly all teachers (96%) in the Genre Focus group explicitly referred to prior learning done in writing lessons, while three quarters (77%) of teachers from the Dimension Focus group did so. Examples of such references were recaps or prompts to remember activities previously done in class, for example “What did we learn about ‘orientation’ on Monday?” This was the only observable difference between the two groups and is a potential source of difference in the way teachers made prior learning relevant for students.

Combined, these results show high levels of reference to students’ prior learning and opportunities for support for writing. In comparison, the incidence of teachers making direct links between specific published or literary texts was lower, with 50% of the GF group and 60% of the DF teachers making a direct link to another text in the same writing purpose. Texts from other purposes were referred to by 60% of teachers in the GF group, and 53% of teachers in the DF group. These numbers are similar between groups, despite the differences in the texts that teachers worked with in their professional development. Interestingly, over half of teachers from the GF professional development group were able to make links for children between texts from differing purposes, despite receiving professional development focusing on only one.

5.10 Discussion of Classroom Observations

As noted, there were slight differences in the frequency of reference to shared prior learning in the classroom observations. These may provide some evidence for a difference in the way that prior knowledge was ‘framed’ as relevant for current learning in the contrasting interventions. It is possible, for example, that the DF’s intertextual focus on contrasting texts meant that for some teachers in the group this focus took

precedence over the need to build on shared learning experiences. Overall, however, the classrooms in both professional development groups looked remarkably similar, in terms of organisation and types of intertextual links made for students. Possibly then, the differing achievement patterns seen in the student achievement results may have resulted from differences in the effectiveness of the professional development types at the level of teacher pedagogical content knowledge. Theoretically, differences may not have resulted from what teachers were attempting to do in classrooms; rather they may have resulted from how effectively teachers were able to achieve these goals based on their own depth of understanding about texts, the needs of their learners and the teaching required to meet these needs.

Evidence from classroom observational data suggests that both groups of teachers taught using genre-based teaching approaches by focussing on one genre a term, despite the fact that a mixed approach to genre was used in the DF workshops. So, despite receiving professional development focused on dimensions of published writing from a variety of genre, all the teachers chose to teach one genre at a time. Thus the professional development delivery style itself (i.e., mixing genre) either did not transfer for these teachers, or was adapted by them. As both professional development types were designed to build teacher pedagogical content knowledge (PCK) it is possible that the two professional development types were differentially effective in this regard. It seems that one approach may have been superior in its ability to prepare teachers to teach as effectively when focusing on purposes other than the nominated assessment focus. That is, the professional development offered to the GF group may have built PCK more flexibly than the mixed genre approach of the DF professional development.

The influence of a possible difference between the groups in terms of PCK was not captured by the classroom observation data, thus there is no direct evidence that some teachers from DF schools taught other genre less effectively than GF teachers. This inference is made based on the student achievement data. Theoretically, the value of PCK would be at the level of teacher decision making. As discussed, PCK for writing would combine knowledge of texts, writing processes, the writing curriculum, the expected developmental trajectories of young writers and the particular students' needs along with practical knowledge of learning resources and activities. Potentially, greater PCK would mean a closer alignment of students' needs and the instruction received. To capture this, much more detailed interactional data are needed, thus the classroom observations offer little information about levels of teachers' PCK or lesson effectiveness. The classroom observations captured data about the types of intertextual links teachers were making, but not information about how well the chosen links responded to what students' needs were.

Why the GF approach might possibly be better in building teachers' PCK is initially puzzling, but does resonate with the transfer literature. The first factor that may have impacted could have been participants' goals (Bereiter, 1995) for the professional development. The assessment tool was organised in terms of individual purposes for writing, which are printed as individual rubrics. Teachers may never have thought it feasible or sensible to teach in ways that allude to more than one genre at a time. Indeed, it is possible that teachers independently concluded that a genre approach would be best, based on their understanding of intertextuality. Alternatively, as teachers were never told explicitly that comparing and contrasting genre was something that could be done with students, this may not have been considered an option, indicating that instruction in some ways may be constrained by assessment practice. Whatever the motivation, it is clear that the mixed approach to genre in the DF professional development was misaligned with

teachers' goals in this regard. Whereas teachers intended to teach specific genre, the professional development may have served to 'muddle' these together. In essence, this may have made implementation more difficult for teachers, having to re-sort their learning into different purposes for writing. Put simply, the dimension approach made learning harder for teachers, who were trying to focus on specific genre.

The second area where the results resonate with the transfer literature is in regard to depth of learning (Greeno, et al., 1993). A GF approach to raising teachers' pedagogical content knowledge meant that there was time for teachers to identify features of texts by making links across multiple examples within a specific genre. Transfer of this deep learning potentially occurred as teachers taught other genre to students in similar ways. In contrast, a relative smattering of examples from a range of writing purposes in the DF professional development may have resulted in less learning for some teachers, by offering too much information at a more surface level across a range of genre, resulting in knowledge that was not deep enough to generalise. That is, although teachers were able to raise achievement on the focus purpose for assessment (which was the 'initial' task) this may not have transferred to teaching in other writing purposes (the 'transfer' task). During instruction in the other writing purposes, this would translate to constraints on these teachers' abilities to choose appropriate learning outcomes to meet student needs, to choose appropriate texts to meet learning outcomes, to work with learners to identify powerful features of texts, to give appropriate feedback to learners about the relative merits of their texts and to offer next learning steps.

In summary, the results of student achievement data suggest that, contrary to initial expectations, a specific genre approach to professional development resulted in greater gains for students not only in a specific genre, but also in other purposes for

writing. In contrast, the DF approach did not necessarily result in gains for other writing purposes. Classroom observation data suggest that the way teachers sought to implement the professional development did not differ markedly in the types of links teachers made or in their frequency. Teachers all taught in a specific genre fashion, and teachers who had specific genre professional development were equally likely to make links for students in other purposes for writing. Theoretically then, the difference may be attributable to the way that the professional development prepared the teachers to teach other purposes for writing. Based on these data, specific genre professional development does seem to generalise to other purposes for teachers in ways that make it possible for them to teach other purposes effectively.

Chapter Six: Case studies of Teaching: Using Theories of Intertextuality to Teach Writing

The classroom observations discussed in the previous chapter give a snapshot of how some of the classes in the schools designed instruction to focus on the intertextual nature of texts. This case study chapter looks in detail at four classes from within the interventions, two from each professional development group. Like the teachers observed in general classroom observations, all the case study teachers took a GF approach to teaching writing. Also like the teachers observed in the classroom observations, the case study teachers made intertextual links of varying types in order to connect texts for students. However, unlike the general classroom observations, the case study teachers observed were selected on the basis that they were ‘effective’, thus were assumed to have already high levels of PCK in writing, and were therefore most likely to refine their writing programmes to incorporate intertextual understandings. While the student achievement data coupled with the classroom observations identified some potential differences between the professional development groups in terms of general teachers’ PCK, the case studies were not designed to evaluate PCK. Rather they were designed to investigate how it might be possible to design an effective classroom programme using intertextuality as an overarching concept.

In large part, then, these analyses focus on the specific types of intertextual links offered by teachers as part of their classroom programmes. However, preceding the specific analyses an initial section provides an overview of the four teachers and the classroom programmes they ran. This overview, based on observation, field notes and the reflective interviews as well as the video data, is intended to offer a wide-view lens so that the reader has a general picture of the classes, how they were organised, and what the

teacher was trying to achieve as a result of the professional development. The subsequent analyses identify the ways that the teachers, taken together as they all taught using a genre focused approach, offered links for students between texts. The analyses build a taxonomy of the types of intertextual links made in these classes. Finally, the features of intertextual links are discussed with reference to theories of intertextuality, identifying ways that they might work to enhance learning for students.

6.1 The Teachers and Their Classroom Programmes

Four effective teachers of writing participated as case studies. All the teachers were nominated by their school leaders as effective, and were interested and confident enough to have researchers and video equipment in their rooms for each writing lesson for a term. The teachers ranged in experience of between 2 and 10 years. Interestingly, three of the four teachers who were nominated were very early in their teaching careers and were teaching in their first school, reflecting the profile of teachers in the area. (Anecdotally, school leaders sometimes complained that patterns of attrition of teachers mean that they are a 'training ground' for young or overseas-trained teachers). More experienced effective teachers tended to be in positions of responsibility which meant that they were either not teaching a class (but might be teaching groups) or were sharing a class. All the participants were also women, again reflecting the general profile of teachers in the area.

6.1.1 Illuminating the Path - Hope

Hope is an experienced teacher with 10 years of experience, all of which has been in South Auckland schools. She is of Samoan descent, as were approximately a third of her Year 5 and 6 pupils. Hope participated in the DF professional development. Her focus for

this term was narrative writing with particular reference to fairy tales as examples of narratives.

Hope's writing programme was highly organised with a number of components within each writing session. At the beginning of each session students began with Sustained Silent Writing (SSW), which in this class was a 10 minute session of independent writing based on a teacher prompt. Each day of the week was dedicated to a different focus for SSW, ranging from diary writing, letter writing, conversations and persuasive writing (the focus for the previous term). At the end of SSW the students swapped books with a self chosen peer, and offered written feedback to that peer based on pre-taught standards of feedback. The class then broke into ability based groups. Each day, one group worked with the teacher while the others worked from a 'task board'. Independent writing activities on the task board included spelling and word work (tailored to each of the ability based groups), independent writing challenges (in this case, narrative), editing and publishing, and reading around the theme (from a set of texts gathered from the National Library service; over 30 different books of fairy tales). By the end of the week each group had worked with the teacher at least once, and completed follow-up writing that had been set in that session; they had done daily skills activities with morphology, vocabulary and spelling, written independently in a variety of genre and may have revised and published one of these pieces.

Because students in Hope's class spent a large amount of time working in groups which participated in different activities from each other, Hope often shared learning among the various groups in her class or used work products from one group when working with another. Namely, she routinely explained what other groups had been doing, and how it related or could be a support for what this group were learning. She

also routinely made explicit why students were asked to do particular activities and where each fitted into the overall plan for the term. In Hope's class, students were explicitly and regularly told what will be happening in the future, how current learning built on previous experience and why it was important to know.

During teacher-led group sessions the students brought a chair, their writing books, a pencil and a leaning board to a circle around the teacher's easel. This group was only interrupted by visitors to the classroom or intercom announcements, but never by students within the class; without comment, Hope used a door bell chime to indicate that the noise levels had risen too high (which meant that visiting researchers were left wondering for days why the door bell occasionally rang when no one was at the door!). At this session the students planned or reflected on their individual writing based on group discussion to guide the writers.

In developing a programme based around the professional development on intertextuality, Hope focused on the use of texts to gain knowledge for writing, "The link to the books and the use of [focus] texts was huge. And that was totally different to the previous term's genre teaching". As a result of the professional development Hope attempted to make strong links between reading and writing; for her, teaching one meant teaching the other,

There is no point in teaching writing without teaching reading, or making that really, really crucial link. And then when I said, 'oh we'd better get onto the actual writing', we were. Well, we were in a sense. You see, we were, it wasn't like we weren't covering any of the features; we were just doing it in a different way.

For Hope the professional development showed potential for the use of texts in writing that she had never explored before, “I don’t know how I have taught writing, without reading, without books, without texts, without reading them myself, without writing it myself, all this time. It’s just the best”. Teacher-led guided writing sessions tended to focus on texts and gaining knowledge and tools for writing from published authors, which the students were expected to appropriate in their own work. Initially, this meant that Hope was concerned to make sure that the students continued to write along with the text analysis that they were doing, and so she implemented SSW as a way to make sure that students were still writing independently on a daily basis, applying the learning from teaching groups and maintaining the learning from previous terms.

Hope was excited by the reading and writing test scores produced by her class that term, vindicating for her what had been a trial of a new way of teaching writing, “Every single child, bar one that was away for the term, just skyrocketed”. The linking of reading and writing meant she also attributed gains in reading achievement to her writing instruction, “when you’re doing such intense pulling apart of texts, and understanding of the vocab, and using the vocabulary in a really meaningful way, it just transfers to the reading”. In addition to assessment scores she was also pleased with the students’ attitude and the stories that were written. “The boys! They, I just didn’t think they would be into it, you know, at all, but by giving them, you know, all these links, all this certain set of tools, that they could use, you know, they came up with, their stories were just great”.

6.1.2 Write it in your Own World – Denise

Denise was a third year teacher who is of Tongan descent, teaching a class of Year 5 and 6s, 20% of whom were also of Tongan descent. Denise had participated in the GF professional development. The focus for writing in the observed term was poetry. Denise

felt that the students would benefit from poetry for two reasons, firstly that it was not something that they would be exposed to outside of school, nor the “imagery and creativity that surrounds it”. For Denise, poetry also had potential benefits for learners as it “helped reinforce extended, rich vocabulary and the teaching of language features”. Each day the reading session occurred just before the writing one, and both were focused on poetry. As a link between the two sessions individual students could choose a poem and offer to read it aloud to the class, who listened for language features in the poem, and discussed these. While students were ability grouped for reading sessions they were not for writing sessions, working instead in mixed ability groups.

The writing session began with a whole class discussion and teacher modelling. Students who felt confident to do so then moved off to write independently, while those needing support stayed on the mat and worked with the teacher, who guided them through the writing task. At different stages, some of the students working on the mat might feel that they could move forward independently, and could leave the teaching session to go back to their seats to work. Students worked on particular pieces at different paces, but generally Denise attempted to gauge where students are at in their writing, asking some students to generate more pieces, or revise again, or publish a particular piece, so that they could all complete one piece of writing and begin a new type of poem together as a class at an allotted time. She was able to do this by having students hand in their books, and offering individual, written feedback, suggestions and instructions. Usually this process took between one and two weeks.

As a result of the professional development on intertextuality, Denise focused on students applying what they learned in reading when writing by basing it on their own lives, “That was part of our reading as well...They’d read what the initial poem was, and

then I'd tell them: ok, now you have to put it into your life and apply that to you. And now you write your own". As a result, the reading and writing sessions, traditionally taught separately, began to become indistinguishable,

Even the kids would say, 'Miss, is this reading or writing?' And I would say, well we are doing it as reading, because we are studying the structure of the read poem, that you've read, but you are actually going to interpret it as to what you feel into your own poem, you become the poet, and you are going to write your own poem.

For Denise, the professional development made her teaching more explicit, particularly the links between reading and writing,

They were getting a double banger. And I just thought: it's just been so rich... I feel, as a new teacher, I feel that I should have been doing this at the beginning, purposefully saying to them, 'oh that's just like in the book, it's written that way'.

While both reading and writing were focused on poetry and seemed outwardly similar, Denise had different aims for each. In reading, she attempted to expose the students to a wide variety of poets and forms of poetry, to teach comprehension of poetry and to identify language features used in poetry. In writing, she aimed for more directed attention to a specific form of poetry and its characteristics so that the students could attempt to write the various types of poems, "It was more structured. So no matter where you were at [in ability], you'd start at the beginning, and then sort of just develop".

Denise felt that because poetry was so individual and creative, it did not lend itself to formal ability grouping, or strict adherence to forms, "Everyone sort of has their own interpretation of a poem, and I didn't really want to mark anybody down for their poem, because it didn't follow my guideline". Instead she preferred to see students' writing as

the reflection of their learning in their own worlds. To this end, Denise worked hard to capture students' ideas and personal links by scribing their ideas for them in class sessions,

They just learnt so much in those lessons ... and I just feel that there is so much I could have done better, just by capturing things that they'd said. Just like what we said before about keeping those interesting things, because there was lots of paper that I drew on and wrote on and lots of things that we'd done that, you know, they weren't (previously) kept.

This desire to capture what students said and pick up on the links they make to their own worlds meant that Denise often relaxed participation protocols in whole class situations, often accepting as many 'called out' contributions as she could and recording these on her teacher's workbook (large sheets on paper, used instead of a whiteboard, which could be kept for future reference). She replicated this technique in small group situations, acting as scribe and prompting students to make links to their lives outside school.

The intertextual nature of reading and writing has given Denise a clear goal for future teaching:

Denise You know, from this term, I just can't wait until next year. You know I just feel really excited about what I am going to be doing in my literacy lesson.

Rebecca Ok, so you are thinking of a literacy lesson now? Rather than a reading lesson or a writing lesson?

Denise For sure.

6.1.3 Layers of Borrowing - Karen

Karen was in her third year of teaching and taught Years 3 and 4. She is of New Zealand European (Pakeha) descent, unlike any of the students in her class. Karen had come to teaching as her second career, after a number of years in the fashion design industry. Karen participated in the DF professional development.

The writing session in Karen's class followed on from the reading session. It began with 10 minutes of Sustained Silent Writing (SSW) which was based on a story starter written by the teacher. At the end of SSW the students volunteered to share their stories by reading their work aloud. The students and the teacher listened for taught features (e.g., imagery) and gave feedback on these.

The whole class then came to sit on the mat. Karen set the purpose and expected learning for the session, often modelling a particular writing strategy, or analysing a text. As a result of this lesson, the students moved off to write. They often did so in groups, working on large sheets of newsprint paper with marker pens, negotiating a group story plan, brainstorm or written text.

As a result of the professional development, Karen tried to implement a programme that explicitly allowed for students 'borrowing' from others' texts,

They are borrowing from each other; they are borrowing from things that they've read. And with that borrowing, as they grow up, they get more and more layers and layers on top. And that borrowing changes. It's not like they are directly taking it out, but they are using that same sort of style.

In order to facilitate this borrowing she offered both published texts and student texts as examples. She also had students working in groups for most of the writing time, with individual application during SSW.

Karen also saw students making links between their reading strategies and writing,

Doing the writing, they are actually improving their reading, because they are becoming more aware when they are reading. They are able to say, ‘oh that was imagery Miss’. So I think they’ve improved their visualising skills when they are reading, from the writing. They’ve naturally taken it up when they are reading. So, I think they are starting to think in pictures. So they were really like little detectives, and focused in on it, so that was really good”.

Rather than similar lessons in reading time and writing time, Karen tried to focus on different aspects in each,

When I teach writing I like to focus on the ideas, and the content, rather than the structure... You know how in guided reading you can talk about the story structure? I do that, I [teach] plot, and storyline [in reading], because that’s quite important”.

Karen felt that things taught ‘in reading time’ were taken up by writers, and things taught ‘in writing time’ were noticed by readers, “and I didn’t even teach that, well I didn’t teach it in reading, they just took it up. So that’s what I meant, by having that writing [borrowing from texts] you sort of hit two birds with one stone”.

6.1.4 Building Towards - Sue

Sue was a second year teacher, of New Zealand European (Pakeha) descent who taught a class of Year 7 and 8 students (none of whom were Pakeha). Sue participated in the GF professional development. In her class, writing sessions ran independently of reading sessions, but both focused on narratives. Writing sessions always began with a warm up activity, often based on independent writing. The main focus of the lesson was introduced with class discussion, a recap of the learning so far and explicit identification of today's learning intentions. After the whole class 'discussion', students moved to work often in small groups of mixed ability on jointly written class or group story.

The warm up activity was invariably designed to foster interaction and sharing of ideas between the students. Examples of warm up activities included 'doughnut' sharing circles where students formed two concentric circles facing one another. They worked briefly with one partner, discussing a given prompt, and then moved to a new partner to discuss another. Another warm up activity involved students writing independently in their own, or another child's, writing book at the start of the session. This was done in the form of a 'build on' story – each day the students swapped books read the story to date in that book and wrote a new paragraph in the child's story "to carry on from where they left off". Sue also read aloud excerpts each day from a published text, to offer an example of another author's approach to "building up" parts of the story upon one another.

The main part of the writing session was based on a unit approach, building on previously taught knowledge over the course of a term. Initial stages of the writing unit focused around deconstruction of texts and labelling of the features using meta-language. These become knowledge resources for writing. The class next planned and drafted a class story, using the features discussed. Finally, students worked in groups planning,

drafting, editing and publishing a group story across the remaining weeks of the term. Sue was notable among the case study teachers as the only one who taught genre using an established approach, in ‘stages’ of ‘deconstruction’, ‘joint construction’ and ‘independent construction’ (Rose, 2009), rather than through layering of focus texts.

For Sue, professional development on intertextuality meant that her writing sessions focused on 'building' on the individual and joint intertextual histories of the class; building on previously read texts, previously written texts, as well as the texts of others. She also spent a lot of time encouraging students to build on what they already knew about narrative texts in general, “the 'building' technique is what I maintained throughout the term” (‘Sue’, personal communication, 13 June, 2009). To this end she spent time at the beginning of each session to recap on the learning so far and explain how the next piece of learning moved forward from previous learning. Sometimes this was a class ‘discussion’; sometimes it took the form of a warm up activity or game. She expected that students continued to use skills and knowledge taught so far, as well as attempt to add in the focus for the day, which, in turn, became part of the next day’s ‘recap’. Mini-lessons were also a feature of Sue’s teaching, feeding in knowledge and skills at appropriate times across the unit. For example, when most groups had completed an initial draft, Sue conducted a lesson on using connectives within and between paragraphs, so that they could use this knowledge when revising their group stories. At all times the students in Sue’s classroom were gathering knowledge and skills in order to build up to an end point: a group narrative to be published for peers.

Intermittently through the term, Sue paused and dedicated part of a session or an entire session to do an evaluation, or “refresher activity”. One example of such a lesson was a ‘bus-stop’ activity where students moved around ‘stations’ and recorded their

answers to the questions posed. This allowed Sue to gauge students' knowledge to date, their attitudes to what they were learning, and their self assessment of how confident they felt writing narratives. In this lesson, Sue was able to affirm what they had been learning to date, and also to make decisions about where the class and individuals were up to. In order for her to build further, she needed to check whether the foundations were yet in place. As she explained to the class,

We are actually quite stretched along the continuum; there are some people that really don't know what they are doing and aren't confident enough, there are some people who are still in the middle, still learning and then we have a big bunch of people who are pretty confident or are working their way towards.

Students' participation varied across the course of the term. At the beginning of the term the class worked on a whole class story, which they planned together, but they then took responsibility for crafting parts of that story in groups. Later, they worked in their groups on a new group story. Students also worked independently on the 'build on' stories in various people's writing books, as well as on the warm up and refresher activities designed to 'recap' on the knowledge and skills being built.

Students' work products reflected this notion of building also. While the warm up activities were written as individuals, and built on one another's ideas in their books across time, the group stories were recorded on large sheets of paper and students shared and contested ideas as they wrote. New sheets were stapled onto existing work products each day, physically building a large, draft, story which grew in thickness each day. These were kept and displayed by being tacked to the 'work in progress' wall, removed when in use, and returned to the wall at the end of each session. Both the class and group stories were displayed on this wall, as were any class recording sheets or teacher

recording sheets which were a potential resource for support. At the end of the unit, published stories were compiled in a book and used as a class library text.

6.2 Intertextual Links in Writing Classrooms

Based on the professional development, the challenge for teachers from both professional development foci was to turn intertextual theory into practice in their classrooms and so, ideally, each used intertextual theories to add consciously to her classroom practices. While intertextual theories do much to account for the learning that students do in all classrooms, these teachers are characterized by the fact that they had been given the challenge during the professional development of using theories of intertextuality to make links for students. What follows is a description of the range of ways (either innovative or not) that they designed instruction to make intertextual links salient to students at an individual or group level, with consideration of the type of intertextual link being facilitated as well as the way in which this was done. Many of these links will be common practice in many classrooms around the world. However, together they provide a classification of the ways that these teachers sought to weave the intertextual histories of the members of their classrooms in ways that fostered learning about writing.

With varying frequency all the teachers made four types of links for students which are relevant to theories of intertextuality. The first type of link was to writing, reading and learning strategies. Teachers explicitly taught students how to use reading and writing strategies to compose and comprehend written texts. More particularly, they were explicit about carefully borrowing from existing texts as a strategy for composing. The teachers encouraged and expected students to borrow words, ideas, literary devices, structures, for example, in a critical and reflective fashion. Students were supported in

their reading to discern what makes a piece of writing effective, and how best to use those techniques in their own writing.

The second type of link was between texts. Teachers linked to specific texts in order to offer a resource for knowledge about writing. They also worked to build linked banks of texts for students, by exposing students to a wide range of texts, building students' intertextual understandings about the relationships between texts by making comparisons and links between texts, as well as working with students to create 'texts about the texts': charts or frames which made comparisons and generalisations explicit. Such comparisons were at genre level, content or theme, structural similarities and differences, style, vocabulary or language features.

The third type of link was across communities and settings. These types of links related to the child's multi-membership of a number of communities. The bank of texts students have experience with, or knowledge about, to draw from, is a product of their membership of a number of literacy communities, which include school, and classroom communities, but also home and community settings which are integral for writing instruction. Even within a class, an individual student is a member of a number of differing social and instructional groups, and so has different school experiences than any other child. Teachers explicitly showed the relevance of making connections to all these potential sources for comprehension and composition.

Finally, links were made back and forth across time. Teachers worked to make links to students' existing intertextual histories, showing how students' previous knowledge of texts or previous learning about texts was relevant to current learning. They also linked to possible futures, making explicit the reasons for learning and showing a

pathway for learning by being explicit in where the learning was going and the way particular activities might build upon one another.

Teachers layered these links in a number of ways in their classes. The most direct for students was orally, through conversations and instructions, questioning, telling, and prompting which showed direct connections for students, and these have been recorded and coded through transcription. Teachers also made links in written form through signs and charts; these became texts in their own right and offered links back to previous experiences and learning, or to other texts. Teachers also made oral references to routines and expectations which served to link patterns of participation or strategy usage, for example, that students would participate in predictable ways in particular activities (that peer feedback sessions, for example, would have certain particular ways of operating). In considering each of these ways of linking, it became apparent that instances of individual links in classrooms could simultaneously be instances of more than one type of link, and often were purposefully layered to offer multiple levels of support for students. For example, often the teacher would give an oral reminder, along with a reference to a particular sign or chart, which served as a textual reminder to participate in expected ways (by prompting students to use the peer conferencing chart as a guide to constructive feedback, for example).

Given that teachers layered links in ways such as those described, the coding categories were not mutually exclusive, with some interactions being coded as several links at once. Each of the types of links and ways of making links is defined and described in more detail following.

6.2.1 Type One: Strategic Links

The first category of links is that of strategic links for learners. These are links in which the teacher makes explicit that students need to employ or develop a reading or writing strategy. Strategic links made explicit the ways of reading and writing that remained constant for learners no matter what text they were trying to compose or comprehend. They linked the current text being comprehended or composed to past and present texts in that the ways of operating with those texts could be generalised. These strategic links have been classified into subcategories which reflect the focus on writing instruction and intertextuality. The first is ‘borrowing as a strategy’, which includes support in reading in order to borrow. The second is explicit links to ‘writing strategies’. Both include meta-cognitive examples and teaching for self-monitoring of the strategies.

Borrowing as a Strategy.

Teachers provided opportunities for students to use texts that they had read as a resource for borrowing. All the teachers did this, but Denise and Hope were particularly explicit about borrowing as a strategy for writing. Often students were reminded to borrow ideas, themes, parts of characters or even simply words from particular texts in order to improve writing skills. For example, “Let’s find out how we can describe the wind using some of the words that we have come across in our reading (Karen, classroom observation, 23 June, 2008).

In this next example, the teacher explicitly condoned the idea of borrowing as something that authors, including her and the students, do to create effective texts:

Teacher	Listen to the question again: How did the author create interesting plot, characters settings?
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Student From other stories

Teacher (records this on teacher's book). He could have used ideas from another story – and what's wrong with that? Who's used an idea from a story that they've read, in a story that they've written? (Puts own hand up) Put your hand up if you've done that.

Student Sort of

Teacher You've used a little bit of it? And a little bit from somewhere else?

Student (indicates assent)

Teacher Perfect

(Hope, classroom observation, 7 August, 2007)

In addition to published authors, other students were also authors from whom it is acceptable to borrow:

Do you like any of the other ones you've heard this morning? Do you think you might use any of these ideas when you do your re-write? I would. I would like to borrow some of these ideas. (Hope, classroom observation, 30 August, 2007)

Teachers facilitated borrowing from others in the class by encouraging them to share ideas and to use others' ideas as raw material for their own writing. Sue and Denise were notable in that they provided time for this in nearly every session. Teachers facilitated this in a number of ways. All created situations where students were asked to share ideas with their peers. In this regard, class discussions often seemed problematic, in that teachers

wanted to build on the links and contributions made by students, but fair and manageable participation was hampered by the size of the group. In all classes ‘called out’ responses were occasionally accepted in whole class situations, most often if it were a single child’s well timed contribution. Teachers varied as to how much they attempted to work with and build on students’ contributions in whole class situations, and how much ‘calling out’ they permitted. All teachers, however, created situations where participation protocols were suspended and students were able to talk at will. Often students were asked to work in pairs or small groups to share ideas, recording these and reporting back to the larger group. Sometimes discussions were not recorded, but simply used as thinking time. These were occasions where students were given time to think through opinions and ideas with peers before using these ideas in individual or class settings, as in this instruction given before a class discussion,

This time you are going to do this, I’m going to give you a minute because you are going to tell your new partner what your orientation was. And then next you are going to tell them what the complication is, ok? (Sue, Classroom Observation, 11 August, 2008)

Teacher-led small group teaching sessions were also activities in which students were allowed to speak at will, and build on what other students were saying. This next excerpt is from a group of students who are working with their teacher to find descriptive phrases (in this case describing trash). The students build on each other’s contributions at will. The teacher participates in the conversation with authority and attempts to record many of the students’ contributions, but does not broker turn taking or select students to talk:

Student Rubbish

Teacher (records) Without saying the word we need to try and think of descriptive phrases that lead us up to it

Student Smells awful

Student Disgusting

Student Rats and ants

Teacher What about them?

Student It attracts them

Teacher (recording) Rats and ants eat it, or is attracted to it

Student Smelly dump

Student Smells like dung

Student Infested garbage

(Conversation continues...)

(Denise, Classroom Observation, 15 November, 2007)

All the teachers also encouraged their students to use each other as resources for their learning. In the following example one student is attempting to construct an acrostic poem about himself, but is not able to think of any words that begin with the letter O:

Student 1 (has been off among his classmates 'networking', returns in a hurry). Miss! Obedient?

Teacher (smiles) Obedient, good word. Where did you get that from?

Student 1 Miss, Henry.

Teacher Good word.

Student 2 Miss, I had “obedient”

Teacher Oh, maybe they [Student 1 and Henry] got it from you...

(Denise, Classroom Observation, 17 October, 2007)

In addition to sharing ideas with others in the class, teachers also supported students in their reading in order that they could ‘borrow’ effectively and critically from other authors.

Now, this is another learning intention for today, and we are going to figure out how authors- and we are going to look at Roald Dahl today- how they build up characters in their stories. We are going to use *The Peddler of Swatham* too, to see if this author has used some really cool ways of making us go ‘Wow that is really awesome’, or ‘Oh my goodness that character is scary’. So we are going to look at ways that they do that. (Hope, Classroom Observation, 15 August, 2007)

And in this next example the teacher asks students to monitor whether they are able to identify features when they read, for comprehension and as an aid to borrowing story elements or structure:

“So who can say now, who can say that they can identify the problem and events in a story? Who thinks they can tell me what the problem is?”

(Hands are raised)

So who thinks they can identify problems in stories?

(A few hands go down)

Well who thinks they can identify the problem in Foolish Jack? (More hands go up).

(Hope, Classroom Observation, 16 August)

Judging by the number of hands being raised for the specific, as opposed to generalised strategy, the students were not willing to make the claim that because they can ask themselves about the plot in this particular story, they will be able to do it every time they read a story. Nevertheless, the generalised question set up an expectation that this strategy will assist comprehension of every story the students read.

Writing Strategies.

Teachers made links for students by reinforcing the use of taught writing strategies in a number of writing contexts: planning, gathering and selecting ideas, using language and techniques to suit their authorial purpose, organising and evaluating their writing. This was extremely common; all the teachers explicitly made reference to writing strategies more than once in each of their lessons. In this example, the teacher and a group of students are at the end of a group lesson focused on rereading and evaluating their stories to make sure that they are 'complete'. Before they move off to work independently, the teacher asks:

Teacher Ok – so a complete narrative, how are we going to be successful at that WALT [“We Are Learning To”]? What do we need to be able to do?

Student Plan

Teacher What could we use to help us plan?

Student The checklist

Teacher Ok, what else? When we read stories, what do we use?

Student Use the author’s techniques

Student 2 Conferencing

Teacher We could use the conference checklist. What else can we use?

Student Old stories

Teacher Old stories? For guidance?

Student Other ideas

Teacher Your imagination? What else can we use to help us plan this out?
What type of mapping have we used before?

Student Story maps

Teacher Have you all done a story map before?

Teacher What else do we do....?

Student Brainstorms

Teacher So you think to be successful at writing a complete narrative we are going to have to plan.

(Hope, Classroom Observation, 4 September, 2007)

The teacher's initial open ended question elicits a lot of student understanding about the writing strategies the students can employ as well as the artefacts they can use to support this. Students identify that they can plan their stories using a conferencing checklist they have previously created, story maps, as well as drawing on ideas borrowed and imagined.

Students were also encouraged to monitor their own use of writing strategies, again, serving to link writing activities as requiring similar strategies. This was most often done through questioning for self evaluation, or self evaluative activities. In this next example the teacher and students have been discussing the students' introductions to their setting. In addition to facilitating the borrowing of authorial techniques, the teacher supports students in evaluating their own work by creating success criteria which they can use as a checklist for success:

Teacher We've all shared our introduction to the setting, and we did say we might make some changes, and that's fine. Introducing setting. How do you do that? How can you be successful at that?

Child Be specific

Teacher I think you need to be specific. How else can you be successful at introducing setting? And we've had great examples of it all

morning long. Think of one that you've heard this morning that was really successful, and what they did as the writer, so that we can put it up here (on the chart), so that everyone else can do it as well.

(Hope, Classroom Observation, 4 September, 2007)

6.2.2 Type Two: Links to Texts

The second category of links made by teachers was links to specific texts, the most direct form of intertextual linking by teachers. Texts abounded in these writing classrooms. Teachers used focus texts as resources for learning about texts, and the craft of writers, and these were built up and referred back to over time. The use of meta-language gave teachers and students a language to discuss texts, but also developed concepts necessary for generalisation across texts. Teachers used students' texts as examples for others and as links to their own previous learning. Charts, signs, classroom resources, and teacher's recording sheets were all texts to which teachers made links, as supports for learning and to build on previous learning.

Focus Texts.

All the teachers used focus texts as a way of exemplifying particular language features or story elements. Hope, Denise and Karen used many focus texts, introducing a new focus text almost daily throughout the unit of work. In contrast, Sue introduced the unit of work by looking at focus texts and made generalisations about these, identifying parts of these texts and meta-language to describe these parts. However, having 'covered' this, Sue used

focus texts much less often later in the unit (much like the ‘writing forms’ (Wing Jan, 2001) approach to writing instruction).

When working with focus texts the students, in some cases, had individual or shared photocopies of parts of the text, from which they gathered ideas or techniques to be used in writing. In other cases the teacher had a large photocopy of the text which could be recorded on, while the students read along in the journals or readers. Use of focus texts was often accompanied by teachers and students using highlighter pens to show examples or by adding annotations in the margins. On the odd occasion students were asked to select a focus text for the class to comment on but, much more often, in-depth reading of a focus text was planned by the teacher to highlight (literally and figuratively) a particular learning intention.

“What I want you to do, have a look at this poem. What we are trying to look at here is features of this poem and what sorts of words are used. Because when we come to write our own poem, it will be easier because we can know what sort of words *we* can use.” (Denise, Classroom Observation, 23 October, 2007)

In the example above the focus text had been chosen as a lesson on vocabulary choice, but published texts were also used to offer ideas for writing, structures, techniques of characterisation and setting introduction, styles of writing, imagery, language devices, themes, connectives, emotive language and connotations in writing:

“Ok so that was a really neat introduction to the setting, and we talked about trying to get those words in there that really, really paint the picture. Because we looked at trying to swap some words in there but it didn’t make it scary enough

did it? We put tulips in there: doesn't make it scary. If we go inside the house and the house smelt of roses and candy floss, does that make it scary?" (Hope, Classroom Observation, 5 September, 2007)

At times students worked on different focus texts. In such lessons students were asked to 'find' particular features or parts in the texts they had chosen. These 'findings' were often recorded and compiled for class use:

So today what you are going to do, you are going to be looking for any book in this class and you can work with a partner and you are going to be finding simple sentences.

When you have found one you are going to read it out to me, but you are going to take turns, you are going to come up to me and what we are going to do, I'm going to put them on a big chart, ok, of what we find in our reading.

You can choose any book around the room.

(Karen, Classroom Observation, June 1)

Meta-language of Texts.

Use of focus texts was characterised by the learning of meta-language to name the aspects of texts and authorship found in the texts. All the case study teachers used meta-language daily. Students worked on understanding the concepts in a read text and then applying them in their own writing.

Sue This group here was about connectives. What I want you to do is I want you to pick five, the five that you thought were absolutely fabulous, go.

 These relate to your learning intention....

Student Unfortunately, eventually, suddenly, then, before.

Sue Also one down here I thought was really, really good: all of a sudden, out of the blue, just then and as soon as, and after that.

(Sue, Classroom Observation, 6 August, 2008)

The meta-language thus offered a link for students between the reading of a focus text and their own writing. Teachers were all explicit about linking with meta-language, explaining learning intentions which reflected this focus,

 What we are also trying to do, as a writer, [is] learning to include the key features of a plot when we write a narrative. So today we are going to really try to understand and break down what's in a plot. What a plot is, how it's written, how we read for a plot, problems, and events and ideas. Like you said (indicates one child), and then we are going to have a go... to have a go at writing one as well.

(Hope, Classroom Observation, 27 July 2007)

 Often classes would have a particular focus over an extended time, which centred on a feature of writing. The meta-language served to link the reading of the focus text with students' writing over time. This next extended example shows the teacher using a focus text to illustrate 'imagery' in writing, which she has characterised for the Year 3 and 4 students as being about 'senses'. As a follow up to the reading of the story the

students spend a number of days writing their own recollections, experimenting with adding imagery in their own writing,

But I want us to read this story about an experience a girl had called Mata and it's at a flea market and I thought it was really cool.

So there is imagery in this and I want you to tell me where it is and I want you to tell me, I will get my highlighter and highlight it....

(..... the following day.....)

Teacher I'm going to read Chelsea's:

One sunny afternoon I was washing the dishes. I could smell the lemon and lime soap when I was washing the plates and cups. I saw the bubbles floating up in the air and some popping on my face. I could hear the plates clinking in the sink.

Who heard imagery in that?

Students Me.

Karen What was it?

Student She heard the plates clinking.

Karen She heard the plates clanking, absolutely.

Student Smell

Karen Smell the lemon and lime.

Student Bubbles.

Karen Beautiful, and also another one she is working on.

Right Chelsea you can go and continue that.

(Karen, Classroom Observation, 4-5 June 2008)

Previously Read Texts (Not Currently the Focus.)

Teachers, particularly Hope and Denise, used different focus texts to build or layer students' learning over time. By referring to texts read previously in class, these teachers were able to rely on a shared intertextual history of the learning community. In this way they linked the texts to each other, to the meta-language being developed and to the learning developed from each. The following two examples show teachers building on previously read texts by looking for similarities between texts, in the first example, and differences, in the second.

Example One

Teacher Alright, now we need to play with this a bit more, we need it to somehow be similar [in our writing] to the types of Kennings [poems] that we have been reading and looking at.

(She refers to whiteboard where various poems are displayed).

These Kennings they all have a similarity here, and what do they all end in?

Student r?

Teacher er (agrees). Okay. So we've got...

(She reads poem aloud from board – some students join in.)

(Denise, classroom observation, 27 November 2007)

Example Two

Teacher Today we are going to look at setting. We did Spooky House last week and what was the setting of Spooky House?

Child It was in a spooky house...

(The teacher opens the book Spooky House and begins flicking through the pages)

Okay, the first two paragraphs was outside looking in to the spooky house. There's another really cool description in this [new] book that I am going to share with you this time, and it's almost the complete opposite of the spooky house.

So we'll have a look at the difference between the descriptions of that setting, and look at how it changed, and hopefully you'll be able to take some of those ideas.

(Hope, classroom observation, 5 September, 2007)

Charts and Displays.

All the teachers made daily use of charts and displays as supports for future learning and links to past learning (rather than as celebrations of work products). The making of charts, signs, checklists or posters were often activities in their own right, but became a feature

of the classroom environment that students could then draw on for support. In one class, for example, students all made “What’s in my Head?” posters (Karen, classroom observation, 13 May, 2008), on which they recorded their ideas for writing topics, and they were prompted or reminded to look at the posters when attempting to generate a new topic for their story. In another, a group of students constructed a list of features that they had noticed in narratives that they had read (characters, setting description, problem, resolution, and theme). They then turned this list of features into a ‘narrative checklist’ to use while they were writing, editing and evaluating their own writing (Hope, classroom observation, 30 August, 2007). Also in this class, learning intentions were displayed on laminated charts, showing how they related to one another and to the reading and writing the students were doing. In a third, written records of class discussions and overhead transparencies with annotated notes analysing aspects of a focus text were displayed next to the ‘work in progress’ (Sue, classroom observation, 15 September, 2008). In the fourth, annotated poems, brainstorming and shared writing were displayed, tacked and spread out across the front of the room (Denise, classroom observation, 30 October, 2007).

Students were expected to use charts for independent as well as instructional writing. Displays from the previous term were used to link to other genre, and offered support for independent writing. Previously annotated focus texts were displayed on charts. In addition, teachers wrote on large sheets of paper sometimes stapled together to make an oversized book (teacher’s workbook), and these were kept in order that students could use these for support, or so that teachers could discuss previous learning by referring to the artefact, as in this next example:

Teacher	This is such a fantastic book – later on they’ve got imagery, who remembers what imagery is all about?
---------	--

We did something about a limpet sticking to a rock – I can't remember what. (The teacher reaches back to the workbook and chart made during that previous lesson)

Child I stuck to my position...

Teacher like a limpet sticks to a rock...

(The students and teacher read from that chart)

...And that's another type of device we can use, and these are "tricks", and we've talked about tricks before.

Child It's a simile

Teacher Yeah, and what's the key word there that tells you that...?

(Hope, classroom observation, 5 September, 2007)

In this way, the charts served as texts in their own right, but they also served as an intermediary link to focus texts and prior learning about texts. As in an example cited earlier, when the students found simple sentences in texts, these were compiled and displayed on a chart, which became a pastiche of bits of various texts for students to draw from when writing. In some cases students could be working with a number of different artefacts simultaneously: they might have the focus text, possibly photocopied and annotated, they might have a learning intentions chart which linked the focus text to the piece they were writing using meta-language, and in addition they might have a chart created from one or more focus texts which pulled out the features. In this example the

students are working with five different texts in addition to the one they will write: a co-constructed worksheet about the features of a narrative, a learning intentions chart, last week's learning intention, the story 'Thumbling' and the teaching sheets which had written questions :

Teacher Okay, have a look up here (indicates teaching sheets displayed on easel which list a number of written questions). The first questions that we are going to ask, answer, before we go on with our writing today, or think about the stories, that you answered last week:

(She brings out a blank worksheet that students co-created and completed last week)

Just as a recap. Every time we do this we are going to repeat ourselves, we are going to remind ourselves each time what a narrative is, the main features of a narrative are, what does a plot have, just a little reminder of these things as well.

(She points to the worksheet)

You are also going to think about, very shortly, 'Thumbling' was our story that we just read. We didn't have lots of discussion about it, but we've had lots of discussion about other texts. We need to figure out what the problem is, you need to figure out how the characters in the story are feeling

Student And acting

Teacher How they're thinking, how they're acting, with each other, on their own. You need to figure out how does the character, or characters, solve the problem that you've identified in the plot. And you need to figure out what the outcome was at the end, or what the theme was. What was the theme or the message that the author is trying to tell us. Before we do that, let's just... (She indicates the learning intention chart)

Let's just look at the learning intention or our WALT ["We Are Learning To"] for this week. We are trying to identify the plot of what we just read, okay, very similar to last week's learning intention (also displayed).

We want to get really good at using plot features, structures and ideas to write our own stories.

(Hope, classroom observation, 8 August, 2007).

Students' Work Products: Examples, Student as Authors, and Sources for the Self.

The pieces of writing in students' books, in progress, or displayed in various forms around the room, were used by all the teachers, in almost every lesson in each case, to make links for students to other texts. This was done in three distinct ways. Firstly students' work products were offered as an example of application of learned writing features to other members of the class. Students were commonly asked to volunteer to read out what they had done to date, while other students sought particular taught features in the work. This served as a link between the texts of various class members, but also

linked those students' texts to the focus text, in that it exemplified similar features or characteristics. Most commonly teachers referred to recent writing, as in this example:

So you are going to be sitting with a buddy and you are going to choose a piece of writing it could be your SSW [sustained silent writing] or it could be what you started yesterday in your "What's in Your Head Poster" that has imagery in it.

You are going to read that piece to your buddy and then they are going to do the same thing back to you and you are going to talk about the parts that you liked the best that had imagery in them and what you liked about how they used imagery. (Karen, classroom observation, 5 June, 2008)

The second way that teachers made intertextual links to student texts was then they positioned (or 'framed') students as authors of knowledge or authors of texts. This meant that other students and the teacher served as initial audiences of emerging student texts. However, two different functions of authorship can be discerned here. The first is the traditional feedback offered to the author, either from teachers or peers about their writing, in the form of a writing conference, peer conferencing or 'sharing time'. The second, which creates the intertextual link, is one of roles, where the teacher gives ownership of the learning to the author of the text. This seemed to be slightly different from praising the work of a student in that it positioned the author as a potential source of learning for others, offering something that could be 'borrowed'. This was often done when commenting on the work of an individual student, as in this example, where the teacher gives Annie authorship not only of the story, but of the borrowing strategy:

Teacher I liked the way that Annie pulled in lots of different ideas

Who was Annie writing as?

Student Cinderella

Teacher She was some sort of princess, not necessarily Cinderella perhaps.
(to Annie) Were you Cinderella?

Annie Yes

Teacher Very good. And she also used something very cool from another fairy tale – who can think what it was?

What other story idea did she borrow this morning?

Student The fairy stallion

Teacher Which is from what original idea?

Student Fairy godmother

Teacher Then, I don't know if you did this or not, she used another idea, from another really cool story

Student Tinder-box

Teacher Yeah, she used another idea with the fairy stallion, the princess got...?

Student What she wanted.

Student Her wishes.

- Teacher Where have you heard about wishes being granted before?
- Student A genie
- Student Aladdin
- Teacher So she's borrowed ideas. She borrowed ideas from Cinderella, she borrowed ideas from Aladdin, I don't know whether you did or not, but it sounded that way because I remember Cinderella getting three wishes from her fairy godmother, whereas yours was a fairy stallion. So is it ok to borrow ideas?
- Students Yes
- Teacher Of course it is, and you can make them your very own, just the way that Annie has made them her very own today.

(Hope, classroom observation, 5 September, 2007)

Groups of students could also be positioned as authors, and their ideas and group work products thus offered as sources for others:

Now some authors, are really awesome, when we talk about characters. And I'll tell you what, we have some really good authors in this class too, that are able to build up characters by using words, and taking us on a bit of a journey and painting a picture as well. And I am going to share some of those from yesterday. We had three people who went away and came up with some words and they were all on a data-chart similar to this, all about our peddler [book character] and what he looks like. And they went away and used those words, either in a flowing story

or in similes, which we are going to look at today. (Hope, classroom observation, 16 August, 2007)

The third function of students' work products was as a source of support for the self, which was particularly explicit in Hope's lessons. Students were prompted to look back at what they had done, to borrow from their own previous writing, to build on the feedback from the teacher, or to remind themselves of past learning recorded in their books. In this way, students' past writing was an explicit source for current writing, and present learning explicitly built on prior learning. Explicit links were made to writing done some time ago, with students' books serving as an artefact to support memory of previous learning, and thus their writing:

Go back and have a look at some other letters if you are stuck for ideas.

Look at other letters that you have written this year. Go back and have a look for ideas, although they are not exactly the same, some of our letters have been quite informal.

(Hope, classroom observation, 5 September, 2007)

6.2.3 Type Three: Links between Settings and Activities

Teachers also facilitated links for students across different activities and different settings, linking people, activities and events in other settings with those in the current activity. Within the class environment they made links between teacher-led activities and independent activities, those done in a group with those in a whole class. They made occasional links to the school community and other school activities. Finally they made extensive links to the students' own communities and to students' general knowledge of texts and life experiences.

Classroom Routines and Environment.

Regular patterns of events or expected ways of behaving could serve as intertextual links for students when they promoted application or maintenance of learning in a variety of settings within the classroom. Different activities within classes may entail different participants, motives, roles or ways of participating for students. For example, in Karen's classroom Sustained Silent Writing was a regular activity where students were expected to write about whatever they liked, but to experiment with the different language features discussed in other classroom settings, thereby applying their learning. In Denise's class, peer conferencing was a regular feature, and had a regular format, so that students could use the support of peers as readers (without the teacher's presence) and read the work of others as writers. In Hope's class, task-board activities served as contexts for application and maintenance of learning, thus linking to the teacher-led sessions. In Sue's class, resources were arranged in centres, so that students could independently access resources, which included the work in progress of all writing groups. In this example Hope is asking the students to create a number of possible plots for narratives, which are to be included in the 'narrative bags' as a task-board activity for independent writing in which students select elements from each bag, and then attempt to construct a story incorporating each element. She links the narrative bag activity with the teacher led activities through meta-language, and also to students' own experiences by prompting them to include personal experiences as sources for plots in stories. The narrative bag in itself is designed as an activity to maintain and support independent application of learning.

So, 'I can develop my own characters, plot, setting and theme when I write' [is our learning intention]. Today we are going to do that, because [I have] bags. (She holds up four plastic bags with cards inside each.) I've got traditional settings,

traditional characters, I've got traditional objects, but I don't have traditional or modern events or plots – I don't have a bag for that, so we are going to come up with those ideas today so that they can go into a bag and you can use them for your story-writing...

You can then try and brainstorm some really awesome plot ideas and events...They don't all have to be like the ones we have read, you can use your imagination here. Think about things that do, that you like to do, think about some events that have taken place in your life, those can be part of our brainstorm. We need to have a whole bag of them, alright? Because I haven't done any traditional plot events or modern plot events for our narrative bag. So these ideas that you come up with are going to go into our bag, for you to pick one when it's your turn to write. (Hope, classroom observation, 25 July 2007)

Links to Community.

Teachers, only occasionally, drew on their knowledge of some of the students' communities by making links to people and places that individual students would be familiar with. Sometimes these were people within the school or local community who were prominent. This was not commonplace, but was used occasionally by both Denise and Hope. In this example the teacher uses a fellow teacher as an example of someone who would need to arch his neck in order to display his impressive jewellery.

Student Miss, what does arched mean?

Teacher What do you think arched might mean? What have we got around the word 'arched' which gives us clues as to what arched might mean?

(No response)

Teacher And what part of the body might they be arching?

(...discussion continues...)

Think of a swan doing it – our necks aren't as long.

Just say you've got some bling on, you've got your bling on, and you want to arch your neck so you can show your bling off

Student (Student lifts chin)

Teacher So what might you be doing, and what might the word arched mean?

Student Um lifting up your neck?

Teacher Oh, there you go. Mr Toa would do it, because he would have some nice bling on, and he would be showing off his nice gold chain.

(Hope, classroom observation 27 July, 2007)

Links to General Knowledge of Texts or Experiences.

Teachers and students alike made spontaneous links to general knowledge to exemplify concepts, gather ideas or make comparisons. These links either referred to general knowledge of texts, not taught in school, or to general knowledge based on experiences. These are taken together as they are both links to individual children's histories, rather

than a collective history, and the teacher's aim seemed to be to bring individual knowledge and experiences into the collective frame. General knowledge about the 'real world' and general knowledge about texts were often indistinguishable as students' general knowledge was so often gleaned through movies, television and internet information texts. Additionally, real world knowledge is knowledge of texts (as seen when the students and their teacher were discussing where they had seen the word, 'fragile'; on boxes). For example these students are discussing the poem "El Dorado", by Edgar Allen Poe, using knowledge based on experiences with texts.

- Teacher Ok, what do you think that El Dorado is?
- Student A city, or a village
- Teacher Like a city, or a place? Like a village? Good.
- Student Miss, it's a place of gold.
- Teacher It's a place of gold. Where does that [text] give that away?
- Student Miss, I've seen the movie.

(Denise, classroom observation, 5 December, 2007)

In this example the teacher asks the students to make links from the text to their own experiences:

- Teacher (reading aloud) When Letty was little her parents had moved to New Zealand, but she remembered the islands so well that she could still see their colours, taste their taste and smell their smell.
- What's a very familiar smell when you any of you who have been back to the islands?

Student	The sea.
Teacher	The sea, what can you smell from the sea?
Students	Coconuts.
Teacher	You can smell coconuts?
	What else can you smell?
Student	Seaweed.
Teacher	Seaweed, Zena what can you smell?
Student	Fish smell.
Teacher	Yes I can remember when I went to Tahiti I smelt salty sea smell.

(Karen, classroom observation, 14 May, 2008)

6.2.4 Type Four: Links Back and Forth through Time

In one sense all intertextual links are back and forth through time, however, teachers used specific ways of showing these relationships to students. They linked to recent learning by using recaps; sometimes under the guise of explaining ‘for those who were away’, but nevertheless explained to all; sometimes explicitly ‘let’s recap’. They often also linked to learning further in the past, making prior learning explicitly relevant to the current undertaking. They also linked to the future, usually the immediate future, using learning intentions or other statements of short term purpose. Occasionally they also made links to a more distant future, to a trajectory as a writer.

The Recap and Links to Previous Learning.

Nearly every observed lesson for all four teachers began with a general recap of what the class had been doing, or learning, to date. This could be an activity (as in this next example), but more often was simply a quick question and answer sequence or review by the teacher.

Sue Right people on the middle [of the circle] are the only ones who are going to talk and people on the outside [of the circle] are going to listen. And you cannot speak one word because next time you are going to repeat the same thing.

People on the inside you are going to start the orientation of the story. What are the four things you need [in] the orientation?

Student Who.

Student What.

Student When.

Student Where.

(Sue, classroom observation, 11 August, 2008)

Teachers would also build on specific aspects of previous learning or identify where students had applied learning in previous sessions:

Student (reads from her writing) My best friend. I have three best friends. They are Milo, Josie and Sina. They are the kindest friends. We share (inaudible).

Teacher You talked about friendship, what we talked about yesterday, very good Priya, thank you.

(Karen, classroom observation, 14 May, 2008)

A specific focus for linking back to previous learning was the maintenance of writing in other genre, taught previously. This type of link was relatively rare, but was found most often as an independent activity in Hope's class. Hope purposefully incorporated maintenance of previously taught purposes for writing as part of the regular classroom routines, as an SSW or task board activity, which was essentially practice. Occasionally, however, other teachers made seemingly spontaneous links across genre, and compared features commonly found in one purpose for writing with those previously taught in another. In this example the teacher discussed the way that character traits interact with the plot in narrative texts, and asked the students to gather evidence about the ways that characters behave in order to try and solve the problem as that character perceives it to be. She compared the need for evidence with the similar need in the persuasive texts the students had written for speech competitions in the school:

You need to find some words in the text that tell me that, that support you, so it's very similar to the supporting evidence that we have for our speeches. You need to tell me where you found that and what words told you that. (Hope, classroom observation, 27 July, 2007)

In this next example, the teacher picks up on a link made by a student, who sees a similarity between what they are learning about writing Kennings poems and what they learned with Miss James about setting the scene in narrative writing; both lessons focused on description, by asking students to use descriptive phrases so that others in the class could ‘guess’ what the students were describing.

Student Like what Miss James done with us?

Teacher For narrative?

Student Yeah

Teacher You are right. You had to make your own.... That was for narratives, exactly right, and you were trying to set the scene. And a few people in here did excellent ones. You have to set the scene without using the actual word of what you were trying to describe. Just like this poem. It’s called a Kennings poem.

(Denise, classroom observation, 16 November, 2007)

Short Term Purposes and Links to the Future.

All the teachers were explicit about what students were learning, sharing learning intentions with the class to show intended outcomes (as part of formative assessment practice). They also sometimes made explicit statements about why students were learning particular aspects or participating in particular activities, and how these related to the intended learning focus. For example:

So what we are doing now is, our learning intention today is up here [on the chart indicated], is to present your story to an audience.

Now your audience is the people, are the readers that read your stories. That includes me, that includes other people in this class and, if you send it out to other classrooms, it includes those people too...

Understand that as an author I get my stories published by a publisher and that happens in real life.

'Understand that as an author', so you are an author because you published your work, you are all authors, an author is a writer and you are all writers.

'Understand that as an author I have readers', you have readers of your work, it could be the people in this classroom, it's me, it's Mrs. Jesson, it's the other classrooms, we send it out to them.

(Karen, classroom observation, 30 June, 2008)

Almost overwhelmingly explicit purpose statements related to school purposes.

Moreover, there were only occasional statements incorporating longer term futures:

Teacher Now that poet is Edgar Allen Poe. Now he is a very famous poet,
 from way back in the days, a long time ago...

Student back in the 80s

Teacher ...and I'd say that when you get to high school or even intermediate [school], you will be dealing a lot more with him...

(Denise, classroom observation, 29 November, 2007)

Most often, however, the stated purpose of an activity was that it could be applied or drawn on in the future when students were writing. This type of explicit statement referencing future writing was made by all the teachers on a regular basis, but not repeatedly within lessons. Examples include:

So, on your 'What's in your Head?' poster you need to get some of those story starters down. So then you have got something to look back on so you don't forget them, and this will make writing your retelling much easier, right? (Karen, 14 May, 2008)

Put your hand up if you might like to use some of these words in a recount, or a letter... (Hope, classroom observation, 23 July, 2007)

6.3 The Intertextual Tapestry of These Classrooms

The categories and types of links described offer one way of dividing and naming the weaving of multiple intertextual strands of the classroom. Most generally, teachers asked students to use similar borrowing and writing strategies across multiple texts. These strategies and multiple texts were woven across multiple settings and activities across time, thus four dimensions of intertextual linking are identified. The dimensions and types described are listed in Table 6.1. Potentially, there were an exponential number of ways that teachers could choose to make links for students within and across the categories, within and across the four dimensions. However, as a summary, teachers taught students to use borrowing and composing strategies based on reading texts, they worked with focus texts in a layered fashion, making links between these texts, comparing and contrasting and seeking generalisations. They led students in creating charts and work products designed specifically as scaffolds for future writing, based on one or more of these layered focus texts, which could be used to support reading with further focus texts as well as students' writing. They used students' work products as texts for learning, both for the author of the writing, and for others in the class. They made links to a variety of texts across a number of different activities and settings, with various participants, and they continually referred back and forth in time, creating and employing texts as support for this, acknowledging and building on prior learning for continued future use in writing.

Table 6-1

Intertextual Links in Writing Classrooms

Type One: Strategic links

1. Borrowing as a strategy
 - i. Sharing ideas for borrowing
 - ii. Teaching reading strategies for borrowing
2. Writing Strategies

Type Two: Links to texts

1. Focus texts
2. Meta-language
3. Previously read texts
4. Charts
5. Students' Work Products

Type Three: Links between settings and activities

1. Classroom routines and environment
2. Links to community
3. Links to general knowledge of texts and experiences

Type four: Links back and forth through time

1. Recap
2. Links to previous learning
3. Short term purposes and links to the future

Table 6.2 displays an outline of the types of links made by one teacher in a single small group lesson. There was continual prompting, reinforcement and discussion of the links by both the teacher and the students, sometimes creating a situation where links remained

‘on the table’ throughout the lesson. Indeed the lesson itself was one in which the written outcome of the lesson involved an ever-present link of creating a group chart to guide individual setting descriptions which built on past learning and would scaffold future learning. Such lessons characterised the way that learning about literacy was conceived of as a network of connections to be grasped in support of students’ writing.

Table 6.2

Types of links found in an example lesson

Links to what?	How is link made?
Previous session	Recap – oral “Let’s just remind ourselves... What is a plot?”
Previous session	Students’ writing books (prompt to look back in books)
Previously read texts	“What’s in a Narrative?” – chart made in previous session Meta-language Borrowing strategy
Previous learning in the group	Oral prompt “So, beginning, middle, end... which is something we talked about last week in our stories”. Teacher’s workbook Meta-language in the teacher’s workbook
Focus text	“What’s in a Narrative?” – Chart made in previous session, discussed with reference to this current text. Oral prompt: “And remember the challenge, try and use some of the words from the story, the vocab, so that you get used to it, and try and use it later on...” Meta-language: students highlighting features Sharing of highlighted sections
Student texts	Pair discussion Sharing of individual student texts Creation of chart : “We are going to get them all together on our big board...”
Future application	...So that we can use them in our writing...” Today’s highlighted focus texts are glued into students’ books Borrowing strategy: “And remember the challenge, try and use some of the words from the story, the vocab, so that you get used to it, and try and use it later on...” Chart is created for future use

Themes Arising from Intertextuality in Classrooms.

The intertextual links observed in the case study classrooms can be interpreted as operationalising a number of themes arising from intertextual theory. For example, teachers' explicit advocacy of borrowing as a strategy reflects cognitive intertextual research which shows that children borrow from the texts around them when writing (Cairney, 1990, 1992). The implication seen in these classrooms was that students were encouraged and expected to borrow words, ideas, literary devices, structures, for example, in (ideally) a critical and reflective fashion. To this end, teachers purposefully used texts as a focus, and expected that students should borrow. Students were therefore supported in reading critically in order to do that borrowing, and asked to consider what makes a piece of writing effective, and how best to use those techniques in their own writing.

The second theme seen in classes was the teachers' need to build linked intertextual histories. Where theory suggests that texts are composed and comprehended based on previous knowledge of texts (Hartman, 1992), for three of the teachers in particular (Hope, Denise and Karen), this meant exposing children to a wide range of texts and building children's intertextual histories, making comparisons and links between texts and generalisations about texts. This also meant seeing learning about texts as connected, as reflected by teachers' constant explanations of learning intentions, purposes for learning and links to previous learning.

Teachers also reflected intertextual theories when they planned to build on students' existing intertextual histories. Based on social theories of intertextuality (Bloome & Egan-Robertson, 1993; P. Harris & Trezise, 1999), each child's intertextual history is unique, different to the teachers' own and based on multi-membership of a number of discourse communities. This makes children's previous knowledge of texts

both idiosyncratic and contextualised but also important to current learning. Teachers seemed to attempt to build on those individual histories by providing opportunities for discussion between learners, and creating opportunities to link to general knowledge and the community as potential sources of comprehension and composition. These opportunities for real discussion were characterised by relaxation of protocols (contrasting with ‘class discussions’ which were often teacher dominated questioning sequences). As such they encouraged ‘uptake’ of links (Bloome & Egan-Robertson, 1993; P. Harris & Trezise, 1999)

To some degree, teachers also attempted to build learning for the future, based on theory which suggests that each child is using texts today which are integral to meaning making in their future (Lenski, 1998). This is seen in the way that teachers presented focus texts, creating activities, charts and signs, and taught metalanguage to support generalised understandings about texts, so that the current text would be one upon which future comprehending and composing could be based.

6.4 Intertextual Links and Transfer of Literacy Learning

Theoretically, taken together, these intertextual links potentially make children’s prior knowledge of texts relevant for their current and future writing, thus supporting a theory of intertextuality as promoting ‘preparation for future learning’ (Bransford & Schwartz, 1999). They may also serve to create inter-contextuality between reading and writing activities, so often taught separately in schools, so that children are cued to transfer knowledge gleaned through reading texts when they are writing. In order for students to bring their prior learning into play they needed see it as relevant to the current context. Intertextual linking in these classes served to cue prior learning about texts, about strategies for reading and writing texts as well as knowledge of texts.

In these classes individual children's prior knowledge and their intertextual histories were a source for their own writing as well as a source for others to borrow. The sharing and recording of these intertextual understandings, coupled with permission to borrow, meant that other people's prior knowledge could also become a source of support for writing. In all the case study classes, pedagogical moves were made by the teachers to 'cue' learners' relevant text knowledge and make it accessible for others.

Crucially, texts served both as the object of inquiry and the products of that inquiry in lessons designed to promote generalisability of learning. The writing of other authors, both published authors and other students, was offered as a source of knowledge as well as a source for explicit borrowing. Using focus texts, children participated in activities designed to facilitate inductive learning, making generalisations about texts based on the current text. The conceptual tools for these generalisations were offered using meta-language. These generalisations were organised and made accessible using texts: charts, frames, checklists and posters, created by students. Teachers thus facilitated the creation of tools in the environment. In this way, the charts, that teachers had students create in order to make links to focus texts, became, in turn, the object of the link. Students' prior learning in some ways resided in these tools, that is, students were not expected to remember everything discussed about writing and texts. Instead they were encouraged to record their understandings for future use, and continually prompted to refer back to these 'intermediary' texts, in that they contained understandings about a number of focus texts. The intermediary texts in this way may have served as 'focusing phenomena' (Lobato, et al., 2003) in that they were features of the environment that cued relevant prior knowledge.

The layering of such text inquiry and creation activities and experiences across a number of texts meant that children had opportunity to re-contextualise their learning based on a number of examples, refining understandings to account for different contexts. In this way students were supported in moving from an understanding of a specific text to more general understandings about texts and types of texts. The intermediary texts were also made available as supports for future writing, either in students' books, or on the walls of the classroom. Thus, in these classrooms, participants reified their learning specifically as support for future learning.

The creation of co-constructed supports in this way has implication for 'authorship' (Engle, 2006) of learning and 'authoritative knowing' (Greeno, 2006). The generalisations found on signs and charts were positioned as the results of children's investigation to be used by the students in support of their writing rather than remembered. The students developed their own scaffolds from reading to support their writing, thus collectively, they 'owned' this knowledge, and potentially had authority to choose to apply it flexibly, to re-contextualise it, or re-organise it based on new understandings.

Opportunities to re-contextualise learning were also afforded by a variety of application and maintenance activities. In each of the classrooms changes in setting, levels of support or participants offered various contexts for learners to practice applying and maintaining the knowledge and strategies learned, and teachers were explicit about these opportunities as sites to practice.

Theoretically, while these practices potentially afforded transfer of learning, there was one area which equally may have constrained transfer. Teachers were often explicit about the reasons for learning, offering short term goals and purposes for learning using

learning intentions. Longer term goals were often not made explicit, except in the shared knowledge goal that ‘we’ need to be ‘writers’. This reflects the current milieu of teaching and learning that expects that teachers write specific, measurable learning intentions and share these with their learners. Further empirical investigation of learners’ goals and transfer in teaching contexts such as these is needed to investigate whether the creation of short term learning intentions impedes transfer of learning by creating a situation where learners work backwards from the goal (Haskell, 2001) rather than seeing a trajectory of participation, or whether learning intentions offer teachers a powerful context for knowledge transfer by framing learning as purposeful over longer stretches of time.

Such empirical investigation from the learner’s perspective is also necessary to identify whether the types of intertextual links made by teachers are indeed powerful for learners in affording transfer by cueing prior knowledge and future application, and creating inter-contextuality of reading and writing. While theory supports the use of intertextual links as a strategy for teaching for transfer of literacy learning, this is only empirically tested in a general sense in this study using student achievement data. More focused investigation at the level of the individual learner is needed to ascertain whether particular intertextual links are powerful in supporting learning, and under which conditions they are most successfully ‘taken up’ (Bloome & Egan-Robertson, 1993) in support of writing.

Chapter Seven: Discussion

The overall aim of the study was to design professional development in writing that would result in increased achievement for students in a variety of writing purposes. Based on theory, it was hypothesised that a focus on the links between texts, intertextual links, would build teachers' pedagogical content knowledge about writing instruction, thus enabling them to refine their instruction, thereby raising student achievement. However, using transfer theory as a guide it was also hypothesised that the nature of those intertextual links, whether they be specific genre based links (GF) or more general links concerning the dimensions of writing across genre (DF), might result in achievement patterns that looked slightly different. Specifically, it was hypothesised that a GF approach might result in teaching that would raise achievement in a targeted writing purpose, whereas a DF approach might result in teaching that produced less pronounced gains but across a wider variety of purposes.

To investigate this, two professional development interventions were designed to raise pedagogical content knowledge using intertextual theory. These two professional development approaches were comparable in terms of training, duration, and context, but differed in the type of texts used as examples and thus the types of intertextual links made between texts. Student achievement data showed the relative effects of the two professional development types on student learning. Results indicated that both groups of schools raised achievement in the targeted writing purpose, but that the GF schools were also able to raise achievement in other writing purposes. This suggested that the learning about a specific genre in the GF professional development was able to transfer for these teachers in ways that also allowed them to refine instruction to raise achievement in other writing purposes. Moreover, there is some evidence that on average this was not true for

all teachers and schools in the DF condition. In GF schools students' mean scores in the 'other purpose' were accelerated by 45 aWs points greater than would be expected based on national averages, bringing them to within 5 aWs points of national means. Conversely, in DF schools, mean progress did not markedly differ from national averages, that is, students' mean scores in the 'other purpose' fell, on average, 10 aWs points compared to national means (measurement error in asTTle is 15 aWs points).

Classroom observations from both groups provided a general picture of the nature and type of intertextual links that teachers were trying to make. In general, teachers from both professional development groups made similar types of links for students, making links to background knowledge, prior learning in class and signs and charts as sources for support in most lessons. They made links between specific published texts, in the same genre and in other genre, in approximately half of lessons observed. Thus a general picture was revealed: for these two groups of schools, who had participated in differing professional development types, the theories of intertextuality had similar implications for the types of links made by teachers.

By taking an in-depth look at four already effective classes, specific details emerged as to the various ways that the teachers organised their writing programmes expressly to make these intertextual links salient. While teachers were idiosyncratic in how they organised their classes for writing instruction, patterns emerged that showed ways of focusing explicitly on students' use of intertextuality to foster ability in writing.

What follows comprises a discussion of each of these facets of the study based on two main understandings concluded from these results. Differences in the resulting patterns of student achievement and progress are taken as reflecting a possible difference in the levels of PCK achieved by the professional development types. Case study data

showing the way that effective teachers use intertextual links as a basis for instructional programmes is used to illuminate the implications, for both groups, of intertextuality as a theoretical underpinning for the teaching of writing.

7.1 Why Might the Compared Professional Development Models Produce Differential Effects on Student Achievement? Discussion of the Contrasting Conditions in the Quasi-experiment

Using the literature on transfer as a guide it was hypothesised that, due to greater specificity, a narrower genre focus would have greater effects on achievement in that purpose for writing. This was an argument based on increased expertise (Haskell, 2001; Perkins & Salomon, 1989) and conceptual understanding (Bereiter, 1995). Having had more time, more experience and more examples, participants in the GF professional development would have developed deeper understandings about teaching a specific genre (resulting in greater achievement for learners in this purpose for writing). Researchers from a cognitive tradition might conceive of this as more elaborated schema due to a greater number of instances from which to reason inductively (Gick & Holyoak, 1983). Moreover, researchers from a situated learning standpoint might describe it as increased experience resulting in participation in ‘valuable social practices’ (Greeno, 1997), that is, participation in a particular discourse community (of writers) for a particular social purpose (genre) (Johns, 1995).

On the other hand, literature suggests that a more general focus might have afforded more opportunities for transfer. Theoretically this would be the result of “abstraction of relevant correspondences” (Gick & Holyoak, 1983, p. 32) based on analogies among different purposes for writing. This is essentially an argument for general strategies and skills (Perkins & Salomon, 1989) for writing in that all writers

consider audience, choose content, organise their writing and select language no matter what the writing purpose.

Overall, transfer theory indicates that generalisability and specificity “trade-off” against one another (Perkins & Salomon, 1989), in that more specialised forms of knowledge are powerful, but are tied to specific domains, whereas more general strategies apply across domains, but are less efficient. Thus, experts are only experts in a particular domain (Haskell, 2001) and learning and cognition are situated (J. S. Brown, et al., 1989; Gee, 2004; Lave & Wenger, 1991). In essence then, this was an investigation of specific or generalisable skills (see Chapter 2.2) as it pertains to writing instruction.

The results of the student achievement data collected indicate that the expected power/generalisability trade off did not operate in these groups of schools. Students at schools participating in the GF professional development not only made slightly greater gains in the focus genre, but sampling suggested that, in addition, they also made greater gains in other genre learned within the year. These gains in another genre in the GF schools were re-iterated at the beginning of the second year when the students’ scores dropped less after the summer break when assessed on a new writing purpose.

Classroom observations suggested that, no matter which professional development model teachers had participated in, their classroom programmes all focused on a specific genre, one at a time, throughout the year. Moreover, teachers from both professional development groups offered similar types and numbers of intertextual links for students. The lack of observed difference suggested that teachers did more than replicate the examples of intertextual links used in the professional development. Rather, they used theories of intertextuality to design or refine writing instruction in their classes. And they did it in similar ways. Why, then, the difference in attainment when students were

sampled on another, taught, writing purpose? Possibly, one model of professional development was superior in its ability to provide all teachers with the pedagogical content knowledge necessary to design quality instruction across writing purposes. The hypothesis is that the genre-specific model of professional development was superior in the way it provided depth of learning for teachers. In terms of student achievement, this greater pedagogical content knowledge arguably allowed a closer match between what students needed to learn in other writing purposes, and the teaching they received, thus raising achievement.

This explanation that GF professional development allowed for greater depth of learning relies on theory, in particular the potential of intertextuality as a conceptual tool which explicitly frames genre similarities as relevant prior knowledge and important resources in ‘preparation for future learning’ (Bransford & Schwartz, 1999).

7.2 Intertextuality and Transfer

Theoretically, intertextuality provides a powerful conceptual basis which affords transfer of learning. As a concept, it explains the cuing of relevant literacy prior knowledge so necessary for transfer. As discussed, transfer theories consider the importance of initial learning, de- or re-contextualisation of knowledge and cueing. Intertextual links, in this study, were designed to foster these aspects necessary for transfer. They were used to learn about texts, to generalise using metalanguage and to create inter-contextuality with other relevant “intertexts” (Lemke, 1992), in an ongoing effort to make previous learning relevant to current task, and the current learning relevant for the future.

Conceptual tools are a necessary, but not sufficient condition for transfer. The notion of conceptual agency (Greeno, 2006) describes learning that is potentially more generalisable, in that learners have control over these conceptual tools in ways that allow them to alter their understanding for application in differing contexts. Such conceptual agency relies on a depth of understanding, and a disposition to use such understanding purposefully in novel contexts. This conceptual agency was the basis for the professional development in this study, in that teachers were asked to transfer their learning in their own ways into their classroom teaching but were not given a programme of work to follow in order to do that. Intertextuality, it would seem, was indeed a useful conceptual tool for teachers in this regard, but was more powerful in terms of transfer when highlighting genre-specific intertextual links. Theoretically the reasons for this may be twofold, both relating to conceptual agency.

The first explanation is that a lesson focus on genre-specific links may have offered more power to learners (who were, in this case, teachers) in terms of the “intertexts” (Lemke, 1992) cued. As Lemke points out, texts are more likely to be resources for interpretation (intertexts) when they are similar at a number of levels, including rhetorical stance and textual similarity. Hence, a focus on texts written for similar purposes encouraged learners to cue genre-specific intertexts as an aid to understanding.

Such cueing of prior knowledge is an essential component of transfer. However, the more general DF professional development in theory may have limited the intertexts cued for some teachers, in that the texts offered as intertexts were not as obviously similar. In effect, the DF professional development identified mainly the differences among genre, and therefore may have denied some learners the conceptual agency

afforded by being able to cue relevant prior genre knowledge. (Indeed, the situation may be worse, in that the dimension focus may have actually constrained learning, possibly confusing some participants by cueing what were seemingly irrelevant texts.) Dimension-focused comparisons thus potentially ignored a wealth of intertextual supports for the learners in terms of the similarity within genre.

It is this wealth of intertextual support offered by the GF approach that may have resulted in greater depth of learning for teachers in this study, in that similar examples make it easier to reason by induction (Gick & Holyoak, 1983). It may be, nevertheless, that a DF approach may still be useful, but only after the identification of intertexts within genre are cued, and therefore may be more applicable to teachers with high levels of prior genre knowledge. Even so, theory supports a view that, when drawing on prior knowledge, texts from within a genre are more salient and offer more support than those written for different purposes.

The second explanation relates to the goals of the learners. Transfer theory suggests that a disposition for transfer relies on learners' goals for their learning (Bereiter, 1995). Classroom observations suggested that teachers all taught in a GF fashion, by focusing on one purpose for writing at a time over the course of the year. This, then, was their goal for the professional development: to gather support and resources to enable them to teach specific genre. For the GF teachers, this was unproblematic. For the DF teachers the professional development possibly constrained their understanding as it did not align with what they were trying to achieve. Even to teach the focus writing purpose, teachers needed to extract genre-specific information and ignore the rest. Theoretically, it could be this 'ignoring of the rest' that resulted in a decreased understanding of other genre, reflected in the lack of student achievement in 'other purposes'.

Therefore, it is hypothesised that the GF intertextual links offered by one of the professional development models in this study afforded transfer more readily by allowing teachers more conceptual agency through deeper understanding, independent cueing of relevant intertexts and apparent applicability. This theoretical position may explain the differing achievement of students in schools in each of the professional development types, not simply in the focus purpose for assessment, but in other purposes, and also at the beginning of the following year when assessed on a new purpose for writing.

7.3 Implications for PD

The results of this study offer some guidance about more effective models of professional development in writing in an era of “increasing pressures toward the pursuit of more effective, efficient, and evidence based practices that deliver improved outcomes for clients” (Webster-Wright, 2009). Currently, in the United States, there are calls for primary grade teachers to be better prepared to teach writing (Cutler & Graham, 2008). Similarly in New Zealand, anecdotal reports suggest that teachers feel unprepared to teach writing (Parr, 2009). Recently, research on professional development highlights the importance of generalised processes, for example, that teachers need to be part of an educational community (Kaplan, 2008), that they adopt an evidence-based inquiry framework (Timperley & Parr, 2007) and yet that professional development be ‘situated’ (Putnam & Borko, 2007). In writing, such learning processes include developing teachers as writers (Kaplan, 2008) and using discussion about students’ writing as a vehicle to promote teacher knowledge about texts (Limbrick & Knight, 2005; Reid, 2007). Processes rely on content, however. Professional development can only impact on student achievement through the improved capacity of teachers, and in this regard the role of pedagogical content knowledge is central (Ball, et al., 2008). Currently, there is an

emerging understanding of what this might look like for writing and how it might impact on student achievement (Parr, 2009). As argued in Chapter Two, theories of intertextuality provide a means to build this pedagogical content knowledge.

Firstly, these findings provide some initial evidence of the potential of intertextuality as a powerful conceptual tool for teachers of writing. While intertextuality has been researched in classrooms and in texts it is not usually an explicit focus in a professional development programme. The results suggest that concepts underpinned by intertextuality supported teachers' understanding of texts, classrooms and student cognition in the context of writing, particularly with regard to building generalisable knowledge about texts in general, rather than considering writing as composition of a discrete text. Thus, there is a clear implication that an understanding of intertextual links across texts, in the social world of classrooms and as a strategy for comprehension and composition, needs to be incorporated into teacher pre-service and ongoing professional education in writing instruction.

The implication arising from the comparison of the two PD types is that given an intertextual focus, a concentration on specific genre for teachers does not necessarily mean that they are unprepared to transfer this knowledge when teaching other writing purposes. Indeed, in this study, evidence suggests that, particularly in the first year, teachers were better served by a specific genre focus even when teaching other writing purposes.

Why the DF professional development resulted in relatively less learning for students when writing for other purposes in this study has been theorised. What is empirically clear, however, is that teachers did not teach in DF manner, that is, they did not offer examples of writers' craft from a range of genre; rather all taught with a genre

focus, and the DF professional development was less effective in preparing them to do that, particularly when teaching ‘other purposes’. Whatever teachers’ motivation for teaching using genre-focused approach to teaching writing, the third implication for professional development is the importance of authenticity (Webster-Wright, 2009). While the DF professional development was arguably ‘authentic’, in that examples were used from the purposes that teachers would be teaching, it was less authentic than the GF approach, which focused on a single genre, as did teachers. Where theory suggests that, indeed, authenticity is an integral feature of professional development, this study offers empirical support for this, showing that in this case the professional development was more successful when delivered in a way that resonated with how teachers delivered their classroom programmes.

7.4 Implications for Assessment

These results underscore the need to collect data about what students can do across a range of writing purposes. While it is tempting to assess a single writing purpose before and after an intervention, the data from this study suggest that, if results are assumed to be indicative of general writing achievement, this may be misleading. Were data not collected about other writing purposes in this study, the two professional development groups would have looked comparatively similar in their outcomes, due to the fact that students in both groups of schools made gains in the focus purpose for assessment. As has been discussed, in fact, the two groups were not similar when students were sampled in another taught writing purpose. Without the sampled data of other purposes there would have been no potential explanation for the DF schools’ more marked drop at the beginning of the second year.

‘Dips’ in achievement at the beginning of a new school year are usually attributable to time away from school over summer (Borman & Dowling, 2006; Borman, et al., 2009). In writing, this is complicated when a new purpose for writing is assessed in the following year (Jesson, McNaughton, Lai, Hsiao, & Leonard, 2009). In this study, this issue was addressed at the beginning of the second year by sampling of students’ achievement in the purpose assessed in the first year. These data suggested that the sampled children did not lose ground in recount (the purpose assessed in the first year) in either professional development focus. The finding provides some evidence to suggest that the prior learning from the previous year was indeed durable, and that the dips in achievement in the DF schools were due to their lower achievement in purposes other than recounting.

Similarly, the results underscore the need to have long term data about learning. Were these data not collected across two years, there would have been no appreciation of the way that the ‘dip’ between writing purposes in the DF schools between the two years negatively impacted upon the trajectory of those students. A pre-post methodology (looking at the results from either year of the present study) would have addressed only a narrow (single writing purpose) and short term (within one year) focus on learning. Thus the implication is that ‘empirically tested’ instructional approaches which do not test for either applicability or durability of learning may be potentially misleading and therefore of little real educational value.

7.5 A Classroom Focus on Intertextuality: Discussion of Case Studies

The second research question investigated what classroom programmes that are focused on intertextual understandings might look like. In a similar way to the results suggested by the classroom observations, the case study teachers operationalised the theory

presented by the professional development by focusing largely on genre-based links. Therefore, like the classroom observations, the teachers from both groups looked more similar than different in what they were trying to achieve.

At the level of the case studies, like the student achievement data, this is also a study of transfer. Further to the focus on transfer, the case studies illuminated how professional development transferred into instruction. The question here was how teachers designed or refined instruction in order to focus on intertextuality. Where many studies of professional development might 'check' for 'treatment integrity', this is not appropriate given that both models of professional development were intended to raise pedagogical content knowledge, thus there was not an expected programme to be put in place. Instead the professional development relied on the teachers to develop teaching programmes, intervening to raise achievement. Observation of case study teachers made clear the nature of the programmes that these teachers developed.

As was revealed in classroom observation data, teachers all sought to teach for genre-specific links in a unit based fashion, and on average, both frequency and types of links were similar in both groups. Analysis of the case studies suggested that there were differences between individual teachers in terms of classroom organisation and intertextual focus (whether more links were made to literary texts, intermediary texts or student texts). Combined, these case study teachers offered examples of what a writing curriculum, designed with intertextual links in mind, might look like. In particular, they made visible the types of intertextual links that teachers sought to make with their students, and the instructional techniques one might employ to achieve intertextual links.

7.6 Implications for Instruction

Results indicated that professional development based around intertextual theories and identifying intertextual links between texts was a powerful vehicle for raising achievement. In the focus purpose for assessment in both years of the intervention, both professional development groups were able to accelerate achievement by at least 30 aWs points beyond that which would be expected based on national averages (which, on average is 27 aWs points (University of Auckland, 2005a)). Using the case study teachers as examples of what effective teachers might do with these understandings illuminates how instruction can be designed to focus specifically on linking texts.

The first of these classroom implications is the potential for the inter-contextuality of reading and writing, and the use of texts that students are reading in the service of instruction in writing. Literature has long been a feature of writing instruction (e.g., Olness, 2006), but in recent empirical research has taken a back seat to process approaches (Calkins, 1994; Graves, Tuyay, & Green, 2004) strategy instruction (K. R. Harris, et al., 2006; K. R. Harris, Graham, Mason, & Saddler, 2002) and genre forms (Rose, 2009; Wing Jan, 2001). Observation of case study teachers has shown that using literature can be a key feature of instruction, and that multiple examples from literature can be employed over time in an explicit way to develop more generalised understanding. Rather than using a single exemplar text to highlight genre forms, three of the case study teachers intentionally layered these texts, comparing them to one another as well as using them as models of a particular feature of writing. These teachers purposefully cued numbers of texts as relevant for students in the quest to be an effective writer.

At the level of discourse analysis, Bloome and Egan Robertson (1993) refer to instances where the teacher attempts intertextual links and these are not taken up by the

students. While, undoubtedly, in all classrooms there are instances of such loss of inter-subjectivity and of misunderstanding, watching teachers in this study showed that, when viewed at a wider level, purposeful strategies were indeed employed to support learners in making intertextual links and to help them move from a specific text to more general understandings about texts and types of texts. Therefore, the second implication offered by the case study teachers is the way in which whole activities could be designed with the express purpose of providing an intertextual link. Teachers did this by working with students to create intermediary texts, charts and signs. All the case study teachers did this, perhaps instinctively, possibly in an effort to make generalisations about texts salient. Such intermediary reifications were an important pedagogical technique which served to “frame” learning as ongoing (Engle, 2006), and to “focus” students’ understanding (Lobato, et al., 2003). Thus, in these classes, the teachers and students co-constructed tools for future learning which potentially afforded transfer across learning activities.

Like these intermediary texts, students’ writing books had similar potential as tools for future learning and reflection. In essence, student work books concretised the intertextual loop (Lenski, 1998). There were examples of students, using their writing book as a tool, who were able to look back on previously constructed intermediary texts, as well as on their own work, and teacher feedback on that work. Used well, therefore, student workbooks can serve to create inter-contextuality between previous and future learning.

The third theme that all teachers incorporated into their programmes was the use of various activities and sites in the classroom for the application, maintenance and orchestration of learning. The teachers all created varieties of activities in which learners were asked to apply the learning done with the teacher in different contexts. Teachers

designed activities to align in a variety of contexts in the classroom through the using of task-boards, cooperative work, scaffolded practice and independent practice. Encouraging transfer to independent contexts, the teachers employed focusing phenomena (Lobato, et al., 2003): signs and charts which linked the learning done in groups with the learning in other classroom activities.

Finally, all teachers were aware of the classroom community as a resource for learning, using students to build and extend the intertextual links of others. They also used student texts as intermediary texts, by linking these back, in turn, to the focus literature texts, offering these as another layer in the intertextual web. Arguably, in an attempt to build on students' intertextual links (P. Harris, et al., 2002; P. Harris, et al., 2004), they also created situations where students were encouraged to speak at will (however classroom norms of politeness, appropriate topics and behaviour still applied).

Thus, despite individual differences in frequency and focus, these common intertextual themes could be discerned across all the case study teachers. These themes offer initial insight into how an intertextual focus might be designed to support writing instruction.

7.7 Opportunities for Further Research

The first avenue of further research is to corroborate the findings in similar studies. Schools are very unlike fully controlled experiments for many reasons, and there are innumerable factors which may have impacted upon learning and led to differential learning, factors which all contribute to the limitations of this study. Teachers, for example, vary in their levels of prior knowledge about writing, reading and text analysis. They also vary in experience, enthusiasm and willingness to try new ideas, as do school

leaders. Schools vary with regard to their learning conditions, morale, workload and curriculum focus. These are factors that have not been controlled for due to the situated nature of the research. However, they are ecologically valid, reflecting the way professional development actually occurs in schools and the way that professional development needs to be successful, in terms of student achievement, in all schools, whatever the other factors. In addition, the unanticipated differences in starting achievement levels between the two groups of schools complicate the analysis and interpretation of gains. Analysis is also complicated by absent and transient students and teachers. Thus further research is needed to discern whether the findings of this study are, in general, applicable to other contexts.

One of the major hypotheses arising from the research was that the GF professional development resulted in higher levels of PCK for teachers than the DF professional development. This explanation relies on interpretation of the data based on theory. Unfortunately, these hypothesised differences in PCK between the teachers in the two professional development groups were not captured by the classroom observations, which gave a general picture of the types of links teachers made, but no evidence of how well matched these were to individual student needs, or how successful the lessons were in terms of student learning. Differences in PCK between the two groups were also not evident in the case studies, which focused on already effective teachers, who were therefore assumed to have comparably high levels of PCK as part of the selection.

Theory would suggest that increased PCK allows teachers to make more powerful teaching decisions and to offer more effective feedback, based on an increased understanding of texts in general, students' texts, writing processes, trajectories of developing writers, and resources and activities which support writing. As discussed,

measuring teachers' PCK in writing and correlating this to student achievement is a nascent body of work (Parr, 2009). Further research is needed which documents the effects of changes in individual teachers' PCK on their instruction in writing. Such a study would illustrate the ways in which an increase in a teacher's PCK might translate into better teaching, which, in turn, means greater learning by the students. This endeavour would require fine-grained interactional analyses across time to identify powerful and less powerful teaching decisions and would link these to evidence of changes in subsequent student learning.

More specifically, two further implications arising from this research deserve further investigation. This study concluded that given an intertextual focus on genre-specific links, teachers were able to transfer understandings about the teaching of writing to other writing purposes. This conclusion relies on two interrelated factors. The first is that intertextual theories do build pedagogical content knowledge about writing for teachers. The second is that genre-focused teaching can lead to generalisable learning for teachers.

In this study it is argued that intertextuality as a conceptual tool afforded the generalisability of teachers' learning, that is, that the two conclusions are connected. However, it merits investigation as to how the two factors operate independently, that is, whether GF links are generalisable in other professional development contexts, and whether intertextuality alone is a useful tool for teachers without overt reference to genre-based links.

It is not claimed here that the DF approach can never lead to generalisable learning. While the DF approach was not successful in this study, this may have been simply due to misalignment of the professional development with the teachers' goals in

terms of teaching and assessing individual genre. Proponents of generalised approaches to the teaching of writing may yet devise ways to avoid the criticised narrow focus on personal narrative (Jenkins & Earle, 2006) and teach students to write for a variety of purposes while still maintaining the depth of learning necessary for acceleration of achievement.

Further research on the relationship between intertextuality and transfer is also warranted. This study offers some initial evidence that genre-specific intertextual links were a powerful resource for teachers. Was this also so for students? It is not clear from this study whether students, like their teachers, were able to make generalisations across writing purposes based on deep initial learning, or whether they relied on remembering the learning from each discrete unit of work. Research is needed to ascertain the ways that students' use of intertextual links accelerates achievement. Research is also needed to investigate whether intertextual linking (presumably called something else when working with students) affords transfer of learning for students through its usefulness as a conceptual tool which cues prior learning.

Finally, further investigation into design of classroom instruction using intertextuality is required. In particular, questions arise as to which features of instruction were more effective for students, and which types of intertextual links best achieved the teacher's purpose. While this study provides some evidence that acceleration of attainment was achieved overall, there is room for further analysis of which facets of the instruction were effective, which were neutral and which may have been problematic from the point of view of the learner. In this study, these were matters left to the judgement of the teacher.

In conclusion, therefore, the current study has shown that professional development focusing on intertextuality was more successful in terms of transfer to other writing purposes when genre-specific intertextual links were cued. Case studies of effective teachers participating in the professional development also showed how it was possible to design a classroom programme with such intertextual links in mind using such techniques as layering literature for students and creating intermediary texts designed to record and focus students' understandings. Both these findings underscore the potential of genre -focused intertextuality as a conceptual tool for teachers of writing.

Appendix A: Intertextual Links Observation Sheet

Using Intertextual Links In Writing : Classroom Observation		
Name		Observed by:
Date:		
Time: _____ to _____		
How is the learning intention shared with learners?	oral / written/ not	What is the learning intention?
Activities:	shared / guided/ independent	What are the specific activities?
Planning/ crafting / recrafting	whole class / group/ individual	
Text focus:		
Using reading of a focus text to teach writing features?	yes / no	Text used:
Explicit teaching of language features	yes/ no	Features discussed:
Encourages children to talk about texts	Published text / teacher's /student's	How?
Explicit links		Specific example(s):
Makes references to any other texts in this writing purpose	yes / no	
Makes references to any other texts (e.g other genre)	yes/ no	
Refers to previous learning about writing?	yes/ no	
Refers to learning in other curriculum areas?	yes/ no	
Refers to charts / signs / resources	yes/ no	
Refers back to learning intention/ success criteria	yes/ no	
Links to children's prior knowledge / experiences	yes/no	

Appendix B: Professional Development Readings

- Beard, R. (2002). The effective teaching of writing. *SET: Research information for teachers* (1), 44-48.
- Cairney, T. H. (1990). Intertextuality: Infectious echoes from the past. *Reading Teacher*, 43(7), 478-484.
- Clarke, S., Timperley, H., & Hattie, J. (2003). *Unlocking formative assessment: practical strategies for enhancing students' learning in the primary and intermediate classroom*. Auckland, N.Z.: Hodder Moa Beckett.
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