

The Use of Instructional Rubrics to Support Intermediate-School-Level Learners with Writing Difficulties

Abstract

A significant underachievement in writing persists internationally. Many learners require more explicit instruction and scaffolding to counter the high degree of cognitive load inherent in writing. Extant research also suggests that educators require support to address gaps in pedagogical knowledge about writing or to effectively use evidence-based instructional practices within time and resource constraints. Drawing on genre pedagogy and cognitive load theory, this mixed-methodology research follows a multiple baseline case study design. All participation was voluntary, based on understanding of the timeframes, procedures and potential risks. Using a researcher-created rubric as the foundation for explicit instruction, feedback and material support in the compare-and-contrast genre, changes in idea expression and the use of genre elements by six New Zealand Year Eight intermediate-school-level learners with writing difficulties were examined over the course of an eight-week intervention. Overall findings show that participants had an increased use of eleven key genre elements and articulated an improved understanding of the genre purpose. Recursive rubric use served as a heuristic to support the provision of more intentional, informed and responsive instruction and feedback and promoted the internalisation of new knowledge. As a material reference guide for learners the rubric provided manageable individualised external support. The implication is that instructional rubrics could be embraced as readily-accessible and easy-to-implement tools which scaffold the entire teaching and learning cycle. The rubric, an already-familiar tool, has the potential to improve teaching practice and writing outcomes for all learners.

Key words: writing pedagogy, cognitive load, scaffolding, rubrics

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Chapter One: Introduction

Rationale

The complex process of writing (De La Paz & Graham, 2002) is an integral part not only of the educational curriculum but also of daily life (Watson, Michalek, & Gable, 2016). Despite its importance, statistics continue to show a significant underachievement in writing internationally (Harris & Graham, 2013; Parr & Jesson, 2016). Some learners evidence more difficulty in writing than their peers. They struggle with multiple elements to include planning, organising, handwriting, spelling and revising (Graham, Collins & Rigby-Wills, 2017). Research shows that these learners may have executive function and working memory limitations which further interfere with the multiple processes involved in the transfer of thoughts into writing (Berninger & Winn, 2006). Thus, for many learners, written outcomes often fall short of the quality of their orally-expressed ideas and language choices. They require more explicit instruction, guidance and scaffolding.

The need for writing support persists at the intermediate-school level and higher (Graham, Olinghouse & Harris, 2009). However, at the post-primary school level there is a shift away from dedicated instruction in how to write (Applebee & Langer, 2011). The assumption at this level of education is that previous instruction has already equipped learners with the requisite degree of foundational reading and writing skills needed to write across the curriculum, that is, to use these skills to demonstrate what they have learned (Applebee & Langer, 2011; Englert, Okolo & Mariage, 2009; Graham, Capizzi, Harris, Hebert & Morphy, 2013; Ray, Graham, Houston & Harris, 2016; Scott, 2012). Moreover, beyond early-primary level increased curriculum and resource constraints impact the ability of educators to provide sufficient individualised instruction and scaffolding (Englert et al., 2009). Additionally, some educators

may not feel confident in their ability to explicitly and effectively teach writing (Graham et al., 2013; Helfrich & Clark, 2016). Thus, research relevant to adapting an already-used instructional tool to support the teaching and learning of writing would be of benefit to both learners and educators.

Modern pedagogy has embraced the process approach to writing instruction (Pritchard & Honeycutt, 2006) which has learners follow a recursive cycle of planning (goal setting, idea generation), translating (actively composing) and reviewing (editing and revising) (Graham & Sandmel, 2011). As part of this approach, educators use a variety of writing tools such as graphic organisers, checklists and anchor charts (Santangelo & Olinghouse, 2009). These may be used individually at different stages of the writing process, or, in combination, with the aim of gradual release to independent writing without these props.

The rubric is another tool that could support the process approach to writing instruction. Rubrics are already familiar to many intermediate-school-level learners insofar as they are frequently used as an assessment tool (Andrade, 2000). Educators use rubrics to provide feedback and to obtain a measure of achievement tied to criteria relevant to idea expression, structure, voice and mechanics, consistent with the elements of the writing process (Andrade, 2000; Hayes & Flowers, 1980). The provision of a paper-based rubric as an external tool during writing could serve as a real-time guide to support learners in managing the components of the learning objective while concentrating on the active process of composing. Moreover, the extended use of rubric-referenced learning objectives and instructional steps throughout the entire teaching and writing cycle could strengthen the clarity and consistency of instructional delivery and align the content and language of instruction with assessment while providing learners with an explicit set of writing expectations and how to achieve them (Martone & Sireci, 2009).

Research Problem

The primary purpose of this research is to investigate changes in the writing behaviours and the quality of written outcomes of students with writing difficulties when an instructional rubric is used to scaffold the teaching and learning process. It specifically examines the impact of instructional rubric use on the ability of learners to transfer a higher number of genre features and ideas from ideation and planning into their final written outcomes. This study will add to the body of research relevant to writing instruction for intermediate-school-level learners with writing difficulties, specifically to the area of curriculum scaffolding tools to be used to support educators in a mainstream inclusive learning environment.

Present Study

In the process of assessing literacy curriculum documents, the New Zealand Ministry of Education (MOE) has previously recognised that almost thirty percent of students fail to meet the national standards for writing achievement at the end of Year 8 (MOE, 2013; MOE, 2020); this is a higher rate of underachievement than found in mathematics or reading. Extant international research into writing includes studies examining the role of rubrics in supporting general student populations, predominantly at the primary school and tertiary levels. Specific studies have focused on learners for whom English is not their first language, deaf individuals, and individuals with behavioural problems. This study differs in that it narrowly considers the use of instructional rubrics with intermediate-school-level learners who have been identified as unlikely to meet the writing expectations of their age and year level as defined by the New Zealand curriculum and literary learning progressions and standards (MOE, 2010a; MOE, 2010b). Extant studies have explored the impact of rubric use during various phases of the writing process such as drafting and revision, or, subsequent to formative or assessment

feedback. This study differs in that it specifically examines the impact of instructional rubric use recursively, by both the educator and the learners, throughout the writing process.

Thesis Overview

Chapter Two reviews the literature on theories of learning influencing literacy pedagogy, with specific attention to the concepts of scaffolding and cognitive load. This is followed by a presentation of elements of successful instruction for learners with writing difficulties, to include the use of support tools such as rubrics. The chapter concludes with a discussion of the research implications for viewing rubrics as potentially recursive scaffolding tools and a chapter summary.

Chapter Three begins with a presentation of the mixed methodology research design. This is followed by a description of the setting and selection process for the case study participants. Next is a discussion of the ethical considerations, followed by a description of the study intervention programme, procedures and timeframe, and measures to support legitimation. After this there is a description of the data collection methods and data analysis procedures as well as a chapter summary.

Chapter Four sets out the research findings, beginning with individual case study results and followed by a presentation of across case findings. The chapter closes with a chapter summary.

Chapter Five discusses the results of this study in relation to the research questions and in the context of the extant literature.

Chapter Six begins with a summary of the study findings, followed by a discussion of its limitations. This is followed by the identification of practice implications arising from the study and recommendations for future research. Study conclusions are then presented.

Chapter Two: Literature Review

Introduction

The literature review outlines broad theories of learning which have influenced literacy pedagogy before discussing theories specific to writing and writing instruction. The definitional scope of the concepts of explicit teaching and scaffolding is explored with consideration of changing educational environments and the challenges faced by students with writing difficulties. The review progresses to specifically discuss research into successful interventions and tools used to support writing, in particular, rubrics. It concludes by considering the research implications for viewing rubrics as recursive teaching and learning tools and stating the research questions to be explored in the study.

Learning Theories

Effective pedagogy is an inductive process drawing on the experiences of educators and learners (Clay, 1998). Individuals do not all learn in the same way or develop cognitively at the same pace. Nor does every learning task require the same skills. As such, evidence-based teaching practices draw from theories of how learners learn in order to effectively meet unique needs, achieve the desired learning objectives and adapt to the specific educational environment. There are two prominent learning theories which have had substantial impact on modern-day writing pedagogy: cognitivism and constructivism (Ertmer & Newby, 2013).

Cognitive Learning Theory

Cognitive theories focus on the internal mental processes involved in how a learner actively receives, organises, stores and retrieves knowledge (Ertmer & Newby, 2013; Schunk, 2012). In the classic information processing model a stimulus is perceived and then, while the new information is held in working memory, related knowledge is accessed from long-term memory

in order to integrate new and existing knowledge into a schema. This schema organises knowledge so that it can be more easily retrieved (Schunk, 2012). If the new information is not rehearsed it is lost, as working memory has both a limited duration and a limited capacity (Schunk, 2012).

Constructivist Learning Theories

Constructivism evolved from cognitivism and thus shares some of assumptions related to how learners integrate and store knowledge (Yilmaz, 2008), for instance the belief that individuals draw on prior knowledge and experience to make sense of new information. However, constructivist learning theories place more emphasis on the influence of historical, social, cultural and interactive contexts (Yilmaz, 2008). Knowledge is not transmitted or acquired, but is actively constructed by each individual (Ertmer & Newby, 2013). Constructivists thus advocate for real and meaningful instructional tasks which include the opportunity to apply problem-solving skills (Biggs, 1996, Ertmer & Newby, 2013; Schunk, 2012).

Sociocultural theory, a form of constructivism arising from key principles in Vygotsky's work, has become dominant in literacy research (Hodges, Feng, Kuo & McTigue, 2016). Vygotsky emphasised that individuals use language to progress their cognitive development, transforming external dialogues into an internal voice which guides the application of mastered knowledge to solve problems in real contexts (Vygotsky, 1978; Vygotsii & Kozulin, 1986). The philosophy behind sociocultural theory has been adopted as a pedagogical theory which envisions the classroom as a place where students build knowledge by engaging in socially meaningful activities and negotiating the interaction between new ideas and existing worldviews (Schunk, 2012; Yilmaz, 2008).

The Simple View of Writing

The dominant model of writing influencing contemporary research and teaching practice is the Simple View of Writing (SVW). The SVW stems from Hayes and Flower's (1980) cognitive process model where writing consists of multiple problem-solving processes (long-term memory access, planning, translating, reviewing and progress monitoring) (Hayes & Flower, 1980). The SVW recognises both lower order skills of transcription (handwriting or typing, spelling and mechanics) and higher order skills involved in text generation (ideas, word choice, content, structure and genre (Juel, 1988; Juel, Griffith & Gough, 1986). Modifications to the SVW, termed the Not-So-Simple View of Writing (Berninger & Winn, 2006), add executive functioning and self-regulation as components of the recursive writing process. Executive functioning includes planning processes, working memory, response control and attention (Watson et al., 2016). Self-regulation includes goal setting, planning, organizing, self-monitoring, self-evaluating and revising (Berninger & Winn, 2006; Watson et al., 2016).

Where constructivists might not fully acknowledge suggested limits on working memory capacity (Kirschner, Sweller & Clark, 2006), the SVW and cognitive learning theory both recognise that excessive memory demands impact performance (Berninger, 1999; Berninger & Swanson, 1994). Good writers are able to hold multiple pieces of information and processes in working memory while simultaneously composing text (Berninger, Garcia & Abbott, 2009; Berninger & Winn, 2006). The cognitive effort used via working memory is called cognitive load.

Cognitive Load Theory

Cognitive load theory is based on the assumption that the goal of instruction is to acquire a schema (Sweller, 1988). When new information is transformed into a schema it can be stored in long-term memory for later use (Sweller, 1988; Sweller, van Merriënboer & Paas, 2019).

Sweller describes working memory as having a limited duration and finite capacity (Sweller, 1988; Sweller et al., 2019). Although there exists some debate about the fixed nature of working memory capacity, there is agreement that such can be depleted due to cognitive effort or high levels of cognitive load (Chen, Castro-Alonso & Paas, 2018).

Sweller (1988) initially identified two types of cognitive load: intrinsic and extraneous. First is intrinsic load, or the difficulty level of the material itself. This is related to how many elements need to be simultaneously processed in order to achieve the learning goal. The second type is extraneous load, or the load created by the way information is presented (Sweller, 1988; Sweller, 2010). Sweller (2010) expanded his explanation to define germane load as the effort needed to form a schema. The cognitive demands of many problem-solving tasks are so great that individuals are only able to concentrate on understanding and completing the immediate assignment; the cognitive capacity needed to create the schema required for future problem solving is unavailable to them (Sweller, 1988).

As applied to Vygotsky's concept of internal speech (Vygotsky, 1978), cognitive load theory suggests that working memory difficulties impact the ability to internalise the skills and strategies required to meet writing task expectations. Writing brings with it a huge intrinsic load, requiring learners to address both surface and deeper features, to use prior knowledge, to generate ideas and to then both transfer and transcribe ideas into text (Hayes & Flower, 1986; Watson, et al., 2016). Research suggests that limitations on working memory affect not only the number of processes a learner can manage at one time, but also the efficiency and quality of each process (McCutchen, 1996). The act of text generation limits the learner's ability to use knowledge of the topic, the writing genre, or, in fact, writing strategies (Graham et al., 2017). Thus, deficits in the management of cognitive load can interfere with a learner's ability to transfer intentions into writing outcomes (Chenoweth & Hayes, 2003). It has been

recognised that students with learning difficulties can find the process of internalising the co-constructed knowledge in order to allow for generalisation challenging (Green & Gredler, 2002). The impact is greater as students engage with more complex tasks or increased curriculum demands as they progress through levels of schooling (Englert et al., 2009).

Instructional Implications

As learners progress from primary school through to secondary school, their writing development is also progressing from associative to knowledge-telling and then through to knowledge-transformation (Scardamalia & Bereiter, 1986a; Perin, 2007). Beginning writers tend to simply write down everything they know about a subject whereas expert writers demonstrate an integration of prior and acquired knowledge targeted towards delivering a solution to a problem using a personal voice (Scardamalia & Bereiter, 1986b). Throughout primary school learners practice writing primarily through the production of recounts or narratives (Parr & Jesson, 2016). As they enter intermediate school, however, there is a shift (Applebee & Langer, 2011; Englert et al., 2009; Ray, Graham, Houston & Harris, 2016; Scott, 2012). Learners are now expected to use their writing to effectively demonstrate their learning in multiple areas of the curriculum, the writing-to-learn approach. To do this they must be in the knowledge-transformation phase of writing (Perin, 2007), capable of manipulating new information to effectively assess relevancy, synthesise meaning and apply the knowledge in a way which demonstrates understanding. The evidence reflects, however, that many learners, particularly those with writing difficulties, have not progressed to the knowledge-transformation phase of writing development as they reach intermediate school (De la Paz, 2007; Harris & Graham, 2013).

While some learners have difficulty with idea generation, for many others it is actually the challenge of planning, organising, transferring ideas into text, editing or revising, or, any

combination of those elements which result in lower writing achievement (Graham et al., 2009). Even where a learner has some knowledge or idea about a topic, deficits in working memory or executive functioning force these learners to rely on long-term memory to generate sentence after sentence until their knowledge of the topic is exhausted (De la Paz, 2007; Gillespie & Graham, 2014; Watson et al., 2016). Whatever planning they engage in targets content, not organisation or structure (Scardamalia & Bereiter, 1986a). Moreover, they do not use strategies for transferring content into writing (Scardamalia & Bereiter, 1986b). In fact, McCutchen (2006) suggests that knowledge telling is an adaptive response to the inability to cope with excessive processing demands. The ability to plan beyond the content of writing and then to actually refer to the plan develops with age (Scardamalia & Bereiter, 1986b). However, the literature suggests that learners with writing difficulties have even greater problems with working memory than their peers which further diminishes the quality of their writing (Berninger et al., 2009; Berninger & Winn, 2006; Graham et al., 2017).

In simple terms, learners with writing difficulties are simply being asked to do too much at one time (Harris & Graham, 2013). In the modern educational environment, they are sometimes left to negotiate the integration of instructional and prior knowledge by themselves. Both cognitive and sociocultural theory acknowledge, however, that there is a continued need for educators to provide explicit content knowledge, strategy instruction and feedback (Gordon, 2009). Some learners might need targeted intervention, ongoing extended instruction and scaffolding (Graham, Olinghouse & Harris, 2009). Both cognitive and constructivist approaches support the use of instruction and scaffolding which reduces the amount of cognitive effort a learner expends and allows for improved focus on the primary learning goals.

Instructional Design

Consistent with the proponents of cognitive load theory, good instructional design can reduce unnecessary cognitive load (Sweller, 1988; van Merriënboer, Kirschner & Kester, 2003).

Although inherent material difficulty cannot be changed, it can be managed in order to assist in schema development (Moreno & Park, 2010). The intrinsic load of a task is influenced by prior learning and existing schemata (Sweller, 2010). Writing instruction must first take into account learner knowledge about writing elements and the writing process. Insufficient knowledge may be due to individual memory or learning issues, or due to ineffective prior instruction. Thus, good instructional design should identify and explicitly address knowledge and strategy gaps.

Cognitive load theory was primarily designed to address extraneous load, the load created by the way information is presented (Sweller, 2010). Unclear or insufficient instruction not only perpetuates gaps in learning, but can increase cognitive effort by requiring learners to reconcile learning objectives, instructional information and task requirements instead of learning problem-solving skills and strategies (Kalyuga, 2010). The use of inconsistent formats and language, as well as the inclusion of too many subtasks can split learner attention and distract from schema acquisition (Hebert, Bohaty, Nelson and Roehling, 2018; Kalyuga, 2010; Sweller, 2010).

Instructional Scaffolding

Cognitive theories also recognise the value of scaffolding to reduce cognitive load by encouraging the acquisition and use of self-regulation strategies (Ertmer & Newby, 2013; Schunk, 2012). From a sociocultural perspective, Vygotsky identified the distance between a learner's actual developmental capability (what he or she can do by him or herself), and his or

her potential with support. He called this the Zone of Proximal Development (ZPD) (Vygotsky, 1978).

The term instructional scaffolding has become linked with Vygotsky's ZPD in the educational field (Stone, 1998). Wood, Bruner and Ross (1976) contemplated that an adult can support or scaffold by controlling task elements that are too difficult for a learner. This manipulation of the task environment would allow the learner to focus on the elements that he or she was already competent to achieve, therefore supporting the learner within the ZPD. The intent is to support a learner to the highest level they can achieve, not simply for one specific task, but rather to achieve a change in capability (Stone, 1998; Vygotsky, 1978; Wood et al., 1976). Instructional scaffolding, based on Wood et al. (1976) and Vygotsky (1978), temporarily provides a range of assistive support so that a learner can achieve a task beyond their current developmental capacity. The scaffolding is then slowly withdrawn and the responsibility for task completion is transferred to the learner (Stone, 1998). The educator's role becomes one of mediator; through dialogue learners transform external experiences into an internal voice (Freire, 1996; Kucer, 2009; Schunk, 2012; Vygotsky, 1978). It is this internal voice, or schema, which acts as a guide for future problem solving.

The initial focus in literacy instruction is preparing learners to read (Rose & Martin, 2012). There is a presumption that after early primary schooling learners have mastered the foundational elements of reading and writing and are able to not only independently synthesise the increasingly complex knowledge they are interacting with throughout the curriculum, but also demonstrate their learning through appropriate writing conventions (Rose & Martin, 2012; Scardamalia & Bereiter, 1986a; Perin, 2007). There is a growing body of research which tends to contradict this assumption, suggesting instead that many learners are still struggling to learn the basic literacy skills that are required to understand and engage with curriculum information,

and, particularly, to articulate meaning through writing (Englert et al., 2009; Gillespie & Graham, 2014; Graham et al., 2017; Rose & Martin, 2012).

In the case of students with writing difficulties, the research-based instructional recommendations emphasise the continued need for a high degree of scaffolding to achieve the writing expectations (Harris & Graham, 2013). The modern educational setting typically involves many learners, segmented units of learning, time limits and progression expectations cued to age or year level. Instruction, support and feedback is provided, in most instances, by one teacher who must simultaneously meet the learning needs of a diverse range of individuals within these constraints. Moreover, some educators lack sufficient pedagogical knowledge of writing and how to clearly and effectively articulate and convey learning goals (Graham et al., 2013; Timperley & Parr, 2009). This contrasts dramatically with Vygotsky's conception of support within the ZPD where one expert adult engaged in a one-to-one, long-term instructional practice within a cultural, historical and social context (Smagorinsky, 2018).

Although the educational environment may have changed, the fundamental principle underlying the concept of scaffolding has not. Research continues to embrace the theory that supported learning can lead to a greater progression in cognitive development than a learner could otherwise achieve (Puntambekar & Hübscher, 2005; Santangelo & Olinghouse, 2009; Smagorinsky, 2018). Vygotsky may not have contemplated a whole class instructional context; however, he believed an educator should work to address the environmental factors making learning more challenging (Smagorinsky, 2011). There is a body of research directed at how to achieve meaningful whole-class scaffolding (Dix, 2016; Smit, van Eerde, & Bakker, 2013), an effort which aligns with the modern drive towards inclusivity in education (Berlach & Chambers, 2011).

The key to strengthening the use of instructional scaffolding within the ZPD for modern learners is the recognition that support needs to be based on shared learning goals, be long-term in its scope, and, be responsive to how learners engage with learning processes and purposes (Puntambekar and Hübscher, 2005; Smagorinsky, 2011; Smagorinsky, 2018). This definition of instructional scaffolding continues to place the educator at the center of the mediation. However, contemporary research also recognises the valuable role of material scaffolds in learning situations where the educator is unable to provide individualised support and instruction to all individuals or groups all of the time (Puntambekar & Hübscher, 2005). Research has been carried out on the effectiveness of a variety of material tools, such as procedural facilitators, graphic organisers and think sheets, which support the educator to deliver quality writing instruction (Harris & Graham, 2009; Santangelo & Olinghouse, 2009; Van Merriënboer et al., 2003).

Elements of Effective Writing Instruction and Intervention

Viewing writing through a mixed discourse of both process and genre (Ivanic, 2004), draws on both the need to utilise cognitive skills to pay attention to text features and to make meaning explicit (Hyland, 2008), while also aligning with Vygotsky's view that the focus in writing belongs on communication in a social context, not simply on mechanics and form (Smagorinsky, 2011). In the process approach learners write for authentic purposes using the stages of pre-writing, writing, revising, editing and publishing, with attention paid to the recursive nature of that process (Graham et al., 2009). The genre approach emphasises the communicative purpose of writing (Derewianka & Jones, 2012). Genre-based pedagogy is becoming more prevalent in literacy instruction (Hyland, 2008). A key element is its aim to ensure that learning goals are both visible and accessible to all learners (Derewianka & Jones, 2012). It uses a staged teaching and learning cycle to ensure that learners understand the genre

purpose and use deconstructed key genre characteristics in supported practice before being released to independent usage (Derewianka & Jones, 2012). Through this process, learners are able to identify characteristics of good writing and to identify the steps needed to achieve the genre purpose (Ivanic, 2004; Graham, MacArthur & Fitzgerald, 2007; Hyland, 2008). It aligns with Vygotskian notions of the ZPD such that students, regardless of independent ability level, are supported through instruction at a curriculum level commensurate with their stage of development (Rose, 2011; Rose and Martin, 2012).

Drawing on both the process and genre approaches to writing is consistent with intervention research suggesting that no one discourse adequately addresses the complexity of the writing process (Graham & Harris, 2018). Both identify several key components of good writing instruction: explicit teaching, goal-setting, and scaffolding (De la Paz & McCutchen, 2011; O'Neill, Geoghegan & Petersen, 2013). Research into effective writing interventions for students with learning difficulties more specifically identify the need for explicit instruction in both writing process steps and in genre text structure with guided feedback during the process (Graham et al., 2017; Gillespie & Graham, 2014). Further noted is the importance of strategy instruction (Gillespie & Graham, 2014). Moreover, for students with writing difficulties, a synthesis of evidence-based practice recommendations reflects the need to use instructional design to control the difficulty of the writing task such that learners are able to progress their writing development (Santangelo & Olinghouse, 2009).

Explicit Instruction

Educational research suggests that writing instruction is not always explicit. Students with writing difficulties lack knowledge about the writing process and the structures and components of genres (Watson et al., 2016). Explicit instruction is needed to ensure learners acquire such knowledge and to assist with the development of task schemas. This is particularly

true for learners with writing difficulties (Harris & Graham, 2013; Troia & Graham, 2002). To be explicit, instruction should be designed to reduce cognitive load (Hughes, Morries, Therrien & Benson, 2017). Five components are considered essential to explicit instruction: skill segmentation; modelling metacognition about key features; the use of faded supports; response and feedback opportunities; and, opportunities for practice (Archer & Hughes, 2011; Hughes et al., 2017). Other components commonly noted as important in explicit instruction are the importance of activating background knowledge, providing clear goals and expectations, and presenting information in ways that aid organisation (Hughes et al., 2017).

Writing within any genre requires a learner to search for and organise knowledge, make connections between ideas and build a relationship between the ideas and the audience (Bazerman, 2009). This study recognises the importance of one genre, expository writing, for engaging with various curriculum areas in the upper levels of schooling, as well as for problem-solving in real-life situations (Hammann & Stevens, 2003). In particular, when writing in the compare-and-contrast genre, learners must make use of summarisation, synthesisation and text structure organisation skills (Hammann & Stevens, 2003) in order to simultaneously process “what to say” and “how to say it” (Hammann & Stevens, 2003, p. 733). Moreover, it is suggested that this genre is extremely difficult for learners to master (Hammann & Stevens, 2003), highlighting the need for more explicit instruction and scaffolding.

To explicitly teach learners how to compose a compare-and-contrast essay, the goal and expectation of answering the key questions of what two things are being compared, what are the points of comparison, how are they alike and how are they different (Raphael & Kirschner, 1985) must be clearly understood by learners. Explicit instruction is further necessary to clearly identify the steps needed to plan: how to identify and organise necessary information and how to structure ideas to effectively introduce the purpose, relate the points of comparison, and

provide a conclusion (Hyland, 2008). Explicit instruction in how to effectively use support tools, such as the external scaffolds discussed below, is also necessary (Sundeen, 2013) so that learners are not splitting their attention between learning how to use the tool and making decisions on how to achieve the task expectations (Sweller, 2010). The elements of explicit instruction overlap recommendations for instructional design which limits extraneous cognitive load (Moreno & Park, 2010).

Strategy Instruction and Goal Setting

Beyond explicit teaching of the writing process and genre characteristics, research into writing pedagogy has identified the significance of developing self-regulatory processes through the explicit teaching of goal-setting and strategy use to improve writing outcomes (Harris & Graham, 2013; Santangelo & Olinghouse, 2009; Wertsch, 1979). It is through metacognitive awareness that learners develop an internal voice or schema (Schunk, 2010). The instructional aim is to support learners from merely responding to the voice of the educator and be able to self-manage the writing process.

One highly effective approach to writing instruction is the Self-Regulated Strategy Development (SRSD) model, a gradual-release model which uses a six-stage instructional format to scaffold independence "...through both social and material support to help ensure students learn to master use of the writing strategies and self-regulation procedures" (Graham & Harris, 2018, p. 143). One of the significant components of training for SRSD involves providing educators with knowledge and understanding of the purpose and key characteristics of writing in a genre, and, knowledge and confidence in instructing learners in writing strategies (Graham & Harris, 2018). The requirement for professional development, additional time and resources and reconciliation of potential incompatibility with curriculum-program direction (De La Paz, 2009; Harris & Graham, 2009), may act as a barrier to implementation

of SRSD (Harris & Graham, 2009) and suggests the need for scaffolding solutions that are achievable for educators within the existing learning environments (De La Paz, 2009).

Scaffolding

Some of the scaffolding techniques used in SRSD, specifically modelling, collaborative planning and material supports, are used in some form in many classrooms. These instructional strategies are well supported by research into both cognitive load theory and writing interventions which suggest that scaffolds should address the learner's need to acquire the schema needed to independently achieve (Hyland, 2008; Sweller, 1988). Whereas Wood et al. (1976) and Vygotsky (1978) focused on the dialectic relationships between a more-able individual as teacher and a learner, recent research lends support to expand the concept to distributed scaffolding, defined as student support via both the educator and a variety of material tools.

In fact, the literature shows a trend toward recognition that the most effective scaffolding is layered throughout both the teaching and learning process (Dix, 2016; Smit et al., 2013). Certainly, material scaffolds such as cue cards, checklists, think sheets, graphic organisers, mnemonics and prompts are useful to highlight task features and to enhance learner awareness of the explicitly-taught strategies needed to complete the task. Utilising these material scaffolds may also help learners to break the task into more manageable segments and lessen frustration or lack of attention (Dix, 2016; Englert, Mariage & Dunsmore, 2006; Englert, Raphael, Anderson, Anthony & Stevens, 1991; Santangelo & Olinghouse, 2009). Research into goal setting and process strategy approaches to writing instruction has also noted the significant impact of “external memory aids” (Torrance, Fidalgo & Robledo, 2015, p. 92), not only to support teachers and learners to identify and achieve the writing goal, but also to help learners self-manage the writing process. The distribution of scaffolding is a valuable way to address

individual learning needs (Martin, Tissenbaum, Gnesdilow & Puntambekar, 2018; Puntambekar & Hübscher, 2005; Thompson, 2013) and to ensure that these evidence-based teaching and learning strategies become more widely and effectively used in the classroom (Dix, 2016; Parr & Jesson, 2016). Material scaffolds are particularly recognised as being both inexpensive and easily integrated into classroom use (Martin et al., 2018) without an undue increase in educator workload. Thus, an extended view of scaffolds as more than simply human mediation is consistent with both Vygotsky's own theories about the utility of material guides (Vygotsky, 1978) and with the aim of cognitive load theory to manage high intrinsic task loads (Sweller, 2010).

Studies have shown that the use of one type of external support, graphic organisers, can assist students struggling to develop an internal schema. Graphic organisers simplify and organise writing tasks, provide a set of steps, and make the writing process visible (Santangelo, Harris & Graham, 2007). They assist learners to focus on key genre elements, and to generate and organise ideas, resulting in better-quality output (Boon, Barbetta & Paal, 2018). The use of graphic organisers have specifically been shown to help students with learning disabilities, “...to visualize and internalize writing principles, knowledge of genre and text structure” (Boon et al., 2018, p. 30).

Despite the positive findings, there are limitations in the use of graphic organisers to support writing. One question that has been raised is how graphic organisers can provide structural guidance that supports the transfer of planning into composing (Boon et al., 2018). In this regard research shows that learners do not always use the written plans they create to transfer their ideas into writing (Jones, 2014). Moreover, the evidence does not clearly indicate that external tools are used in alignment with instruction or assessment. In particular, the level of explicit teaching and metacognition that might be delivered instructionally from the teacher

does not always appear to be included on the paper-based support tools routinely provided to students (Boon et al., 2018; Martin et al., 2018; Martone & Sireci, 2009). Nor are the assessment criteria delivered in the same terms as the instructional learning goals or guidance prompts on supporting tools (Martin et al., 2018; Martone & Sireci, 2009).

Educational literature reflects an increasing focus on the need to ensure consistency in instruction, assessment and learning activities (Biggs, 1996; Biggs, 2003). Elements which have been identified as fostering alignment include scaffolding learners, providing opportunities to understand and engage with performance criteria, promoting the transparency of task structures and purpose, and, providing learners with skills to develop self-monitoring (Boud & Falchikov, 2006). To be effective for learners, understanding and use of assessment criteria must come at the beginning of instruction, not at the end (Biggs, 1996). Instructional scaffolding, to include all material scaffolds provided to support learners, should be aligned with instructional content and delivery as well as with assessment criteria and format (Carson & Kavish, 2018; De La Paz, 2009; Dexter & Hughes, 2011; Martin et al., 2018).

To be successful, scaffolding should be based on the elements of explicit teaching. It should model and encourage metacognitive thinking, be responsive to the time and point-of-need for individual learners, and be distributed across educators, peers and material supports (Dix, 2016). The use of a recursive scaffolding tool for instruction, support and assessment would align with principles of constructivist learning, the SVW (to include recognition of working memory limitations), and evidence-based pedagogy. Moreover, cognitive load theory recommends that instructional information be integrated so as to avoid split-attention and redundancy effects causing unnecessary extraneous load (Sweller, 2010). In effect, the perpetuation of separate means of instruction, in-task support and assessment forces learners into cognitive overload. Rather than focusing on learning the information and acquiring their

own schemata they expend resources trying to reconcile the varying instructional, activity and assessment materials (Kalyuga, 2010).

Rubrics

The various instructional techniques and materials used to support writing instruction in the classroom have in common the aim of identifying, simplifying, organising and setting goals to achieve the task expectations. Rubrics are one material tool which have become increasingly popular in education (Andrade, 2000). Generally, a rubric can be defined as a scoring matrix providing for gradations of quality tied to a set of performance criteria (Allen & Tanner, 2006; Andrade, 2001; De La Paz, 2009; Goodrich, 1996; Turgut & Kayaoglu, 2015). Rubrics are used extensively as a way to assess writing at the close of a learning task (Andrade, 2000; Bradford, Newland, Rule & Montgomery, 2016; Turgut & Kayaoglu, 2015). They typically include at least three levels of achievement and address elements related to content, organization, language use, vocabulary and mechanics (Andrade, 2000).

Rubrics fall into several categories. A task-specific rubric might narrowly focus on features tied to genre elements. A hybrid rubric might include both surface features and genre elements (Center for Advanced Research on Language Acquisition, 2018). A holistic rubric involves rating based on an overall impression of the work whereas an analytic rubric separately considers each characteristic (Center for Advanced Research on Language Acquisition, 2018). Primary trait rubrics, developed by Lloyd-Jones and Carl Klaus (Lloyd-Jones, 1977), are further distinguished in that they focus on the specific tasks most crucial to the writing purpose. They are both task-specific and analytic in nature and have the advantage of aligning task expectations with task assessment (Hamp-Lyons & Henning, 1991; Martin et al., 2018; Martone & Sireci, 2009).

There is a growing body of research emphasising the potential for rubrics to provide necessary individual support in a way that is manageable for educators within the modern educational environment (De La Paz, 2009) if used during the writing process rather than only for end-of-task assessment. These “instructional rubrics” (Andrade, 2000, p. 13) are easy for teachers, parents and students to understand and use. Instructional rubrics are also easy to tailor to address specific writing genres or individual learning needs (Andrade, 2001; Andrade, 2005). Instructional rubrics should provide a detailed description of the assignment criteria, to include the qualities of a model outcome (Allen & Tanner, 2006). They make task expectations clear and provide guidance and real-time feedback during the writing process to help students achieve the learning goal (Li & Lindsey, 2015). They also support students to develop metacognition, self-monitoring and self-regulation skills (Andrade 2000; Goodrich, 1996).

Developing an effective instructional rubric is a process (Andrade, 2000), requiring careful reflection on how to identify and define both performance criteria and quality levels. Key considerations are to avoid unclear and negative language (Andrade, 2000; Li & Lindsey, 2015) and to include reference to characteristics of strong writing as well as how to avoid common weaknesses (Andrade, 2001). A focus on genre-specific traits is particularly useful in making task expectations clear (Andrade, 2001). With respect to mastery levels, it has been recognised that too many levels of quality could overwhelm learners (Allen & Turner, 2006; Wolf & Stevens, 2007). Cognitive load theory specifically recognises the potential for split-attention if learners are provided with too many task criteria or guidance representations (Sweller, 2010). Further, Vygotsky (1978) emphasised that mediation should lead cognitive development and aim for the highest level of mastery.

For beginning writers, or those with writing difficulties, the use of a material guide can further serve to compensate for the difficulty they have with self-regulating the writing process

(Andrade & Boulay, 2003). To address this need, research suggests that instructional rubrics should be used as an external support during the writing process (Andrade, 2001; Andrade, 2005). To be effective, the elements of the rubric need to be explicitly taught in detail. The educator needs to ensure that the learners fully understand the vocabulary and objective of each criterion and have a copy of the rubric available for reference (Sundeen, 2013).

During the past two decades, educational researchers have examined the use of instructional rubrics in various contexts. The findings are consistent in supporting an improvement in the quality of writing outcomes when learners use a rubric during the writing process. The various studies highlight the role of the elements of explicit instruction, goal setting, a scaffolding approach and constructive alignment in successful rubric use.

First, the research suggests that an explicit instructional approach to introducing learners to rubric elements and how to use them acts as an external dialogue (Abraham & Lektor, 2013). Appanah and Hoffman (2014) noted that the use of a rubric as a self-editing tool helped intermediate-school-level deaf students to "...internalize knowledge about their writing and use this knowledge to evaluate and improve their writing" (p. 278). Key to the study was the explicit training with respect to the understanding and application of each category of the rubric, to include the use of worked examples as a guide (Appanah & Hoffman, 2014). Similarly, Sundeen (2013) found that the provision of explicit instruction on how to use a rubric during writing improved the expressive writing of secondary students, particularly helping learners to develop an increased awareness of the assignment criteria. The wider implication in these studies is that the repetition and supported application of rubrics might assist learners beyond task completion and to transform external knowledge about the writing process and self-regulation strategies into an internal voice. Greenberg (2015), looked at rubrics in the context of improving scientific writing skills with older students. She based her rubric on a

deconstruction of a research report, recharacterizing it as 60 separate learning outcomes relevant to either content or format goals. Students who used the rubric as a guide when writing their report demonstrated better quality outcomes. Greenberg (2015) suggests that this “blueprint” (p. 215) helped students to focus on reconstructing elements of a good final product. She compared the deconstructed rubric criteria to an internal script. However, Greenberg noted that the student reports were then graded using the same rubric as a scoring instrument. She queried whether the students were merely using the rubric to address the grading criteria and whether this limited the internalisation of knowledge for more general application.

There is research suggesting that rubric use fosters the metacognition process by helping learners to set goals for writing (Appanah & Hoffman, 2014). When used with English as a Foreign Language writers, Turgut and Kayaoglu (2015) noted an improvement in writing outcomes and reported a student perception that rubrics helped to identify the elements of good writing and to set a goal of producing quality writing. Carson and Kavish (2018), who looked at rubrics in the context of a university-level sociology program, also noted positive results and emphasised the focus on presenting learning goals as expectations. The extant research is consistent with the notion that a key element of scaffolding is to make learning goals clear and to focus on long-term substantive elements rather than simply surface features (Eltringham, Hawe & Dixon, 2018).

One of the purposes of instructional scaffolding is to promote self-regulatory learning (Andrade, 2000). Many of the studies into rubric use during writing note behavioural changes in learners suggesting that rubrics do assist students to develop independence in using writing strategies. Bradford et al. (2016), who examined the role of rubrics in assisting early childhood level (New Entrant and Year One equivalency), noted that once a student understands how a

rubric can help them to improve their writing and meet the assignment expectation, “...they no longer solely depend on the teacher, but can instead use the rubric as a tool to self-monitor the writing process” (p. 464). Appanah and Hoffman (2014) also noted that rubric allowed students to work more independently, to learn for themselves, and to develop self-monitoring and self-editing skills.

Extant research also reflects that instructional rubrics can link learning with assessment in line with the drive towards constructive alignment (Biggs, 2013). The framing of rubric criteria as specific substantive content expectations promotes critical thinking and self-regulation while aligning instructional objectives, learning tasks and materials and outcome assessment (Ayhan and Turkyilmaz, 2015; Carson & Kavish, 2018; Sundeen, 2013).

Finally, beyond the suggested learner support, rubrics have the potential to support educators to meet the objective of providing effective writing instruction. The construction of a good rubric can do more than allow for easier and consistent assessment of written work. The process of evaluating the knowledge and skills required for the learning objective can assist the educator to design instruction and scaffolding that is explicit, clear and precisely aligned with key content and processes as well as learner levels. The rubric becomes a framework for instructional delivery, scaffolding the educator to consistently deliver quality instruction and feedback (Cooper & Gargan, 2009) through “...breaking the writing course into measurable observable components and directing students towards manageable learning targets” (Turgut & Kayaoglu, 2015, p. 56). Then, when used throughout the writing process, the rubric can foster self-reflection and highlight an educator’s need to change their teaching approach (Bharuthram, 2015; Cooper & Gargan, 2009). For example, where a group of students demonstrate difficulty mastering one component of the learning objective, an educator should consider whether the instruction was clear and explicit or whether the task was properly aligned

with the learning objective or whether additional or different scaffolding is required (Allen & Tanner, 2006). The incorporation of feedback from the learners aligns with the principles of explicit teaching (Archer & Hughes, 2011) and scaffolding in the ZPD (Vygotsky, 1974; Wood et al., 1976). It can strengthen both the validity of the rubric as an assessment tool as well as informing the educator of the need to clarify and refine its terms and organisation to ensure learners' understanding (Logan & Mountain, 2018). As recommended by Sundeen (2013), one aspect to be further considered is the impact of instructional rubrics on explicit teaching and modelling.

The use of rubrics is not without debate. It has been questioned whether the emphasis on individual criteria is contradictory to the multidimensional nature of writing, or, whether the rigidity of defined guidelines inhibits creativity (Eltringham et al., 2018; Sundeen, 2013). Researchers have also identified challenges related to crafting rubrics which balance the weight of substantive versus surface features in writing (Ayhan & Turkyilmaz, 2015; Eltringham et al., 2018). Extant research addresses this by placing the responsibility on educators to guide and support students in their goal-setting, and to focus them on the social practices and discourse goals such as audience, and voice (Eltringham et al., 2018). In order to establish instructional rubrics as an important scaffolding tool there is a need to obtain a better understanding of how such rubrics should be framed, delivered and used by both educators and learners (Allen & Tanner, 2006; Andrade, 2001; Bharuthram, 2015; Sundeen, 2013).

Chapter Summary and Research Implications

Students who struggle with writing may have difficulties with many aspects of the process (Graham et al., 2017). At the intermediate-school level these students are expected to write to learn in the context of the whole curriculum and to demonstrate a higher level of thinking (Englert et al., 2009; Koufsoftis, 2018; MOE, 2007; MOE, 2010; MOE, nda; Scott, 2012). As

these learners advance through school levels, class sizes increase while both the time devoted to learning how to write and the opportunities for formative real-time feedback diminish (Koufsoftis, 2018; Scott, 2012). Yet, despite their need for additional instruction, explanation and support relevant to the writing process, compared with lower primary writing instruction, less individualised support is often available.

Extant research suggests that an expansion of the concept of scaffolding to include external materials such as rubrics can assist learners. As an external support a rubric can provide learners with a schema that focuses on key part-whole tasks needed to achieve their learning goals (Andrade, 2001; De la Paz, 2009; Greenberg, 2015). To meet the objective of supporting struggling writers the research agrees a rubric would need to explicitly establish goal-based expectations; contain instructional guidelines; and be used by both educators and learners as the basis for feedback and assessment throughout the writing process (Andrade, 2000; Sundeen, 2013. Research suggests that aligning the elements of instruction, mediation and assessment could serve to reinforce the schema needed to master the task (Martin et al., 2018; Martone & Sireci, 2009). There is also a growing body of study results suggesting that instructional rubrics could operate to scaffold and improve teaching practice (Baruthram, 2015).

The current study stems from promising research findings showing that rubrics can help educators and learners to understand the important characteristics of good writing and the skills and strategies needed to master genre expectations (Andrade, 2001; Appanah & Hoffman, 2014; Bradford et al., 2016; Carson & Kavish, 2018; Greenberg, 2015; Sundeen, 2013; Turgut & Kayaoglu, 2015). Studies directly exploring the use of instructional rubrics have, however, raised many questions and present with some limitations. First, extant research into rubrics used for instructional purposes spans a range of contexts from early primary through university-

aged participants, and focuses on specific populations such as English language learners or deaf individuals. One population identified as a focus for future research is struggling writers of intermediate-school age. Other studies with this age group included a wide-range of abilities as opposed to a focus solely on struggling writers (Andrade; 2001), and those studies attending to learners with difficulties are aimed more narrowly at specific language and communication considerations (Appanah & Hoffman, 2014; Turgut & Kayaoglu, 2015). This study is distinguished in that it focuses solely on intermediate-school-level learners identified as having difficulties progressing their writing development to the expected level for their age and year group. The literature also repeatedly raises the question of how instructional rubrics can assist in translating knowledge into writing (Andrade, 2001; Sundeen, 2013). Both Puntambekar and Hübscher (2005) and Smagorinsky (2018) emphasise the importance of understanding how scaffolding tools are used in education. Studies relevant to rubric use suggest that such may not be constructed in a way which complements instructional content or assessment, might not be presented in a format that is clear and unambiguous, or, that the usage of such might not be explicitly taught (Andrade, 2001; Greenberg, 2015; Sundeen, 2013). As noted, Martin et al. (2018) suggest the need for consistency between planning, revision, self-assessment and teacher-led formative assessment tools. Extant studies reflect the use of different rubrics for support and scoring (Andrade, 2001) or rubrics associated with curriculum publishers or industry-developed rubrics (Bradford et al., 2015; Sundeen, 2013; Turgut & Kayaoglu, 2015) or lack any detailed description of the rubric used (Carson & Kavish, 2018). Like Appanah and Hoffman (2014) who created a rubric to reflect issues facing deaf learners, this study uses a researcher-created tool based on consideration of evidence into effective writing interventions for struggling writers. However, the instructional rubric used in this study is not only the external scaffolding tool used by learners during writing, but also forms the basis for the explicit genre instruction and serves as the assessment tool or scoring instrument. This study

considers how the reimagining of the integral elements of effective instructional design, delivery and scaffolding into a recursive instructional rubric could better support learners within their ZPDs to progress writing development. As such, this study will add to the research of rubrics as tools which promote explicit instruction and provide recursive and distributed scaffolding to foster improved learning outcomes.

Research Questions

The purpose of this research is to investigate changes in writing behaviours and outcomes of learners with writing difficulties when an instructional rubric is used to scaffold the writing process. There are two research questions:

1. How can instructional rubric usage throughout the teaching and learning cycle impact the ability of learners with writing difficulties to transfer ideas into written outcomes?
2. How can instructional rubric usage throughout the teaching and learning cycle impact the ability of learners with writing difficulties to meet the specific genre characteristics of a writing task?

Chapter Three: Methodology

Introduction

This chapter outlines the methodological approach used to guide the research. It commences with a discussion of the reasons for choosing a mixed-method, multiple baseline case study design. It then describes the setting and participants as well as the ethical considerations and how such were addressed. Next, the data collection methods are presented, to include describing the intervention materials, procedures and timeframes. Then, there is an explanation of the data analysis methods used. Finally, the chapter discusses measures taken to support the legitimisation of the study, followed by a chapter summary.

Research Design and Philosophical Assumptions

The aim of this study was to investigate the ways in which a purposefully-designed instructional rubric can support learners with writing difficulties. The research questions were framed to investigate both writing outcomes (measurable impact of rubric usage on quantifiable number of ideas and genre elements included in writing samples) and behaviours (qualitative observations of changes in participant understanding and development within various aspects of the writing process). Writing behaviours should more specifically be understood as evidence of planning, organisation, goal setting, self-regulation, and self-monitoring (Stallard, 1974), apart from and through the use of the rubric (Andrade & Du, 2005; Eltringham et al., 2018; Greenberg, 2015; Sundeen, 2013).

The underlying relational epistemology of a pragmatic worldview afforded this researcher the scope to acknowledge both the multi-faceted nature of writing and the multiple aspects of rubric usage explored in the research questions. This study used a mixed-methods design to team the rigor of measurement with a deep understanding of contributing factors so as to more

effectively guide teaching practice (Creswell & Creswell, 2018; Creswell & Plano Clark, 2011; Kivunja & Kuyini, 2017; Sammons, 2010). The use of a wholly quantitative methodology would have failed to obtain data useful in corroborating or mediating the changes in writing behaviours and outcomes over the course of the intervention. And, the use of a wholly qualitative methodology would have failed to gather measurable evidence of changes in writing outcomes.

As shown in the Research Phase Timeline (Appendix A), this study followed a multiple-baseline case study design (Kucera & Axelrod, 1995) and was clearly bounded by time, place and task (Yin, 2014). It examined the effects of an eight-week intervention on the ability of six students with writing difficulties to transfer a higher number of ideas into a written draft and to write content that aligned with the structure and purposes of a genre-based writing task: compare-and-contrast writing. The use of multiple case studies acknowledges the belief that the writing outcomes and behaviours under study are not unique to a single person and that the inclusion of multiple cases can assist in demonstrating a transferability of the findings (Barone, 2011).

The methodology was fixed; the role of quantitative and qualitative methods was planned prior to implementation of the study. All data was collected in parallel and concurrently from the same participants, and analysed separately prior to being merged for a discussion of findings and conclusions (Creswell & Creswell, 2018; Creswell & Plano Clark, 2011). The collection of qualitative data, in the form of learner and teacher responses to semi-structured interview questions, writing samples, planning notes, and field notes of session observations, served three purposes. The first purpose was to obtain baseline assessments of learner familiarity with rubrics and the compare-and-contrast genre, and to obtain evidence of writing behaviours and performance. Second, the collected data assisted the researcher in identifying and

understanding factors mediating or moderating the role played by rubric use and the impact of the study intervention. Third, the qualitative data provided the context for the comparison of quantitised writing outcomes throughout research study phases.

Description of the Data

Setting

This study was undertaken within a decile three co-educational, full primary school in suburban Christchurch, New Zealand. The school community is ethnically diverse with approximately three hundred students from Year 1 through Year 8; a team of three teachers is responsible for approximately forty Year 8 students. The intervention was administered over the course of Term 3 (22 July - 27 September 2019).

The setting for the interviews and intervention sessions was a resource room in a building detached from the Year 8 classrooms but proximate to other learning spaces. The researcher and participants sat around a conference table. One end of the table was reserved for a display easel used to post the learning objective and instructional materials within easy view of all participants. The space was quiet and, for the most part, free from distractions. Occasionally someone would access the room to borrow or return materials or students would be playing outside. The researcher would pause or repeat discussions as needed to compensate for these interruptions.

Sampling Procedures

This study was designed as an intervention with six student participants. To ensure that recruitment resulted in an information-rich pool of candidates, a purposeful, homogenous sampling method was used (Onwuegbuzie & Collins, 2007). The team of three Year 8 teachers from the participating school nominated a number of potential participants meeting a series of

eligibility characteristics determined by the researcher. These criteria aimed to target learners representative of struggling intermediate-level writers, allowing for insight into a specific phenomenon, in this case the efficacy of instructional rubrics to scaffold the teaching and learning process and improve writing outcomes (Onwuegbuzie & Collins, 2007). The first criterion was met by researcher selection of a mainstream, English-medium school as the study setting. The second criterion limited the sample pool to Year 8 students. This allowed for a fairly homogenous sample with respect to curriculum level and achievement expectations.

The e-asTTle, an online tool used by schools to assess Year 1 to Year 10 students' achievement and progress in curriculum areas to include writing (MOE, 2007), converts rubric scores into scale scores which are then matched with the appropriate curriculum level (1 through 8) and performance bands (the designations of B, P and A stand for Basic, Proficient and Advanced) (MOE, n.d.b). In New Zealand, according to the national curriculum for writing, students in Year 8 are expected to,

...create texts in order to meet the writing demands of the New Zealand Curriculum at level 4. Students will use their writing to think about, record, and communicate experiences, ideas, and information to meet specific learning purposes across the curriculum.

(MOE, 2010, p. 35).

The New Zealand Literacy Learning Progressions anticipates that at the end of Year 8 students should be writing at Level 4 (MOE, 2010). The third criterion thus defined learners with writing difficulties as students not expected to meet the end of Year 8 writing progressions. The participating school was requested to nominate candidates who have been assessed as working at or below Level 3P using e-asTTle or equivalent assessment results.

A fourth criterion excluded students with identified behavioural problems. This operated to ensure that the study intervention could be safely and fluently delivered by a single researcher. Finally, the fifth and sixth eligibility criterion excluded students identified as eligible for English for Speakers of Other Languages support and students already in receipt of in-school writing support from consideration. The rationale behind these exclusions was to eliminate additional or confounding variables such as comprehension issues or targeted instruction outside of the study intervention which could impact participant writing outcomes.

After identifying a pool of eight students meeting the eligibility criteria, the Year 8 teaching team redacted candidate names to initials. The researcher assigned each candidate a number and then randomly selected six participants. The remaining potential participant pool was held as a waitlist in the event any selectee was unavailable or unwilling to participate for the duration of the study intervention. This small number is consistent with the recommendation for single case research designs where there is a sole researcher running the intervention and collecting all data (Creswell & Creswell, 2018). The sample size and participant composition were identical for both the qualitative and quantitative methods used throughout the study (Onwuegbuzie & Johnson, 2006; Onwuegbuzie, Johnson & Collins, 2011).

The selected participants comprised two girls and four boys aged approximately 12 to 13 years. For the purposes of anonymised reporting they will be referred to by pseudonyms: Adam, Peter, Rachel, Theo, Kade and Nancy. The two Year 8 teachers typically involved in the classroom literacy instruction of the student participants also took part in the intervention. This selection process was self-defining as it correlates directly with the student participant selection. For the purposes of this research the literacy teacher for Peter and Rachel will be referred to by the pseudonym Ms Smith and the literacy teacher for Adam, Theo, Kade and Nancy by the pseudonym Ms Brown.

The six participants were randomly divided into two groups of three. The initial draw placed Theo, Kade and Peter in one group. A preliminary discussion with the Year 8 teaching staff revealed that Rachel and Theo are twins and that their parents were comfortable either with them placed in the same or in separate groups. The Year 8 teaching staff recommended a change to the initial draw so that three friends (Theo, Kade and Peter) not be placed together.

Table 1 sets out the resulting group assignment and participant demographics.

Participant	Gender	Literacy Teacher	Group
Adam	Male	Ms Brown	A
Peter	Male	Ms Smith	A
Rachel	Female	Ms Smith	A
Theo	Male	Ms Brown	B
Kade	Male	Ms Brown	B
Nancy	Female	Ms Brown	B

Table 1: Participant Demographics

Ethical Considerations

Planning and implementation of this intervention was guided by the University of Canterbury Human Ethics Policy. Ethics approval was granted by the University of Canterbury Educational Research Human Ethics Committee (ERHEC) prior to the commencement of the research. The ERHEC documentation is found in Appendix B.

Key ethical dilemmas involving educational research are research relations, informed consent, data storage and how data is disseminated (Ramrathan, le Grange & Shawa, 2017). In this study, the potential for a power differential between the researcher as an adult and the

participants as children was addressed on two bases. The first was the collaboration with the school principal and teaching staff to identify participants appropriate for the study; to select times, locations and duration that did not disadvantage the participants; to ensure all safety checks under the Vulnerable Child Act had been completed; to encourage participants to speak to teachers or their parents/whānau/aiga/caregivers if uncomfortable; and to explicitly acknowledge the right of the participants to ask questions, make complaints, take breaks or withdraw from the study at any point (Ramathan et al., 2017). The research participants also had the option to review data transcribed from interviews and respond relevant to its accuracy.

The second is that participation in this study was on a fully voluntary basis. Prior to the commencement of the study all participants and their caregivers were provided with information sheets (See Appendices C, D, E, & F); these were written in English only as no learners identified as English Speakers of Other Languages participated in the study. Informed consent was obtained from the school, the teachers and all caregivers (See Appendices G, H, & I). The student participants also provided signed assents (Ramathan et al., 2017) (Appendix J). The information provided to these individuals was presented in plain language and included details sufficient for an understanding of the purpose and process of the research study (Ramathan et al., 2017). Consent was obtained based on understanding of the public nature of a completed thesis and its availability via the University library. The participants in this study were known to the researcher; however, as the participants were advised, their anonymity is protected via the use of pseudonyms in reporting findings.

Additionally, all information related to this research was kept confidential, accessible only to the researcher and supervisory university staff. Data was stored either electronically on a password-protected drive or in a locked cabinet in a secure location for the duration of the study. Following completion of the research, paper artefacts will be scanned into electronic

format; the originals will be destroyed. All data will be destroyed after five years. Participants were informed of these conditions.

Any concerns relevant to the potential social and/or psychological risks involved in conducting a withdrawal-type intervention have also been considered and addressed. As noted, all safety checks and any other procedures necessary for compliance with the Vulnerable Children's Act were conducted. Further, any safety risks to the researcher or any of the participants were minimised as a result of the eligibility criteria specifically excluding any known behavioural problems. All parties involved were informed of the withdrawal nature of the intervention; however, such is commonplace in an educational setting and the time and place for such was decided in consultation with school staff. Efforts were made to ensure that students did not miss out on social or learning opportunities in other areas of the curriculum. The duration of each session was also short, to minimise time away from class. Participants were advised they could take breaks if needed during the sessions or the interviews. The information sheets included explicit advice and encouragement for participants to ask questions or have discussions with teachers, parents/whānau/aiga/caregivers, or to ask the researcher any questions. The advice further included the contact information relevant to filing any complaint. Finally, all participants were advised of the right to withdraw from participation at any time.

Data Collection Methods

The researcher was solely responsible for administering the study intervention and for all data collection, with the exception of the initial assessment of writing achievement used to establish eligibility, which was done by teachers at the school in the course of their normal assessment processes.

Interviews

One form of data collection utilised in this study was the interview. As detailed below, the student participants were interviewed both prior and subsequent to the study intervention. Additionally, the two literacy teachers were interviewed subsequent to all intervention phases. All interviews were transcribed by the researcher and each participant had the opportunity to read the transcription and comment on its accuracy or to make clarifications. The visual and non-verbal aspects of the student interviews were recorded in observational notes as opposed to on the transcript presented for review. This decision reflects the researcher's desire to allow the student participants to make comments and questions on the substance of their responses without being exposed to any potential embarrassment or stigma attached to the researcher's note on their facial gestures, body language or length of response time. The transcript itself is, in effect, already interpreted data (Kvale, 1986) as it cannot perfectly represent the precise enunciation, emphasis, rate of speech or other contextual factors, much less the attendant physical gestures or intended meanings. Moreover, this approach reflects the researcher's focus on the substantive content to inform participant description or to provide explanation for results.

Semi-structured pre- and post-intervention student participant interviews

The pre-intervention interview was the initial meeting between the researcher and each participant. The researcher began with introductions and a casual conversation to establish a rapport and ensure that the participants were comfortable. The purpose of the interview was to ascertain prior knowledge and understanding relevant to the compare-and-contrast text type and rubrics. Also, the interview was used to identify writing attitudes and behaviours as well as student perception of which instructional elements helped them to achieve better writing outcomes. The interviews were semi-structured in that they were guided by a prepared list of

issues to be covered (Appendix K), to include descriptive, experience, behaviour, knowledge and feeling questions (Cohen, Manion & Morrison, 2007). The phrasing of the questions allowed for fixed-alternative (yes-no) as well as open-ended, unstructured responses. The researcher used simple and precise language, and offered further explanation where required. During the course of each interview the wording and order varied to reflect individual understanding of the questions or response to the topics (Cohen et al., 2007). In many instances the researcher rephrased a question or made suggestions to clarify meaning or to elicit a meaningful response. The researcher also endeavoured to maintain a posture of active and non-judgmental listening. To respect each individual's sensitivities, where the researcher sensed that participant had no response to offer or was not comfortable with the question, the researcher moved on to a different topic. At times the researcher made encouraging noises or reflected on remarks by responding with "good," or "okay." At times the researcher also probed prior remarks to elicit further understanding. Throughout the researcher allowed ample time for the participant to reflect or consider before responding.

After completion of all intervention phases, student participants were asked questions similar to those prior to the start of the study intervention, with the addition of questions specific to their attitude towards the paper-based rubric (Appendix L). In particular, the participants were asked to discuss what features they would need to include to write a good compare-and-contrast essay, and, how they could use a rubric to help them improve their writing or make the writing process easier. The intent was to identify any changes in writing attitude, knowledge or behaviour related to use of the rubric and to explore student perspectives on how they used the rubric while writing. In each case, the question topics on the interview protocol were followed as a guideline, with probing for clarity when needed. The format was closest to a guided approach to interviewing (Tashakkori & Teddlie, 2010).

Post-intervention Teacher Interviews

Subsequent to all intervention phases, the participants' classroom literacy teachers were interviewed. The interview was guided by a prepared list of open-ended questions (Appendix M). The teachers were asked to talk about behavioural changes such as planning, attitudes towards writing, organisation, quantity produced and content quality. Rather than targeting a specific research question, the intention was to explore a different perspective as to researcher-observed changes in participant writing behaviours or outcomes, to include any potential mediating factors. During the interviews the literacy teachers expressed interest in reviewing some of the writing samples and discussing some of the results, leading to a more conversational interview format.

Writing samples pre-, during and post-intervention

Multiple writing samples were obtained from each participant throughout each of the study intervention phases (Blind Sample, Baseline, Delayed Baseline, Intervention and Independent Sample). These provided a basis to analyse changes in writing performance. Obtaining writing samples during different phases and using a staggered phase implementation timeline reduces the chance that measured changes are due to extraneous factors (Kazdin, 2011).

The writing samples produced by the participants over the course of the study intervention phases represented a source of raw data. These samples were quantitised by the assignment of numerical values based on a point-system for evidence of the two dependent variables (a) number of ideas expressed; and (b) number of elements of content and writing structure specific to the compare-and-contrast genre included.

To score the first dependent variable (number of ideas expressed), each pair of texts was pre-analysed to identify an overall number of facts available to the participants for incorporation into their writing. Over the course of the intervention, field notes of observations, as well as

visual analysis of the writing samples, suggested the need to re-evaluate the coding scheme to add any additional facts which arose from group personal knowledge and collaborative planning discussions. The expression of ideas in each writing sample was reviewed against the finalised Paired Texts and Idea Scoring Guides (Appendix N). The total number of ideas expressed as a fact about one of the two subjects within the topic were added together to arrive at a total number of ideas (facts) expressed in each writing sample for each participant.

The scoring scheme for the second variable (number of genre elements included) is based on the rubric criteria used throughout the intervention. The initial version of the rubric (Appendix O) was constructed based on consideration of a graphic organiser matrix designed by Englert et al. (1991); the principles of primary trait scoring (Lloyd-Jones, 1977); and, compare-and-contrast writing composition analyses used by Hammann and Stevens (2003), Hayes and Berninger (2014), and Macarthur and Philippakos (2010). The elements of the compare-and-contrast genre were divided into subcategories and then further into discrete sub-tasks within each category. Over the course of the intervention, field observations of participant understanding and use of the rubric resulted in amendments to both the structure and content of the rubric.

Based on the final version of the rubric (Appendix P), one point was available for each of eleven key compare-and-contrast elements: inclusion of an introduction paragraph; identification of the two things to be compared and contrasted; informing the reader of the purpose to compare and contrast; inclusion of a hook to gain reader interest; the expression of ideas as direct comparisons or contrasts; utilisation of either the block or point-by-point organisational structure; utilisation of cue words to make a comparison or contrast; inclusion of a separate conclusion paragraph; summarisation of the key similarity/similarities discussed in the main body; a summarisation of the key difference/differences discussed in the main

body; and, inclusion of a concluding or personal opinion statement. The expression of ideas was counted here based on participant use of facts as a matched set of similarities/differences. For example, the idea that polar bears and grizzly bears both have fur but that the fur differs in colour counts as one direct similarity/difference. Although the rubric further included an expectation of including details from the text to support comparisons and contrasts, this was omitted from the scoring due to the subjectivity difficulty in defining what would count as a detail.

Planning Notes

During the Intervention Phase, each participant was provided with an additional external scaffold for writing, a paper-based version of the rubric (paper-based rubric). Any annotations made on the paper-based rubric or other instructional materials were collected as data.

Field Notes of Observations

Throughout the research study, detailed field notes of observed writing behaviours were collected by the researcher as a participant observer (Tashakkori & Teddlie, 2010). Some of the sessions were also audio recorded to establish a record for later consistency checking. The observational notes were unstructured and intended to act as a means of documenting a rich description of the setting, procedures and observed behaviours (Cohen et al., 2007). The researcher maintained a reflective awareness of reactivity, taking cues from session dialogue, observed expressions and body language of the participants as well as the researcher's own responses to the ongoing experience. Finally, the field notes included an analytic component, noting patterns and themes to be analysed and used to provide collaboration for the interpretation of individual results (Cohen et al., 2007).

Materials

The Paired Texts

Consistent with the aim to scaffold writing and reduce cognitive load, the intervention utilised paired texts (Appendix N) as opposed to open-ended verbal or visual prompts for writing in the compare-and-contrast genre. In all intervention phases the paired texts were read out loud by the researcher to reduce reading demands and to minimise potential difficulties with decoding and comprehension (Hebert et al., 2018; Rose, 2011). The texts included information necessary to identify similarities and differences needed to form comparisons and contrasts. The intent was to lessen the impact of subject matter familiarity or interest, and to steer the focus away from information generation and towards making meaning from the ideas through text composition.

The Rubric

The rubric used in this study was envisioned as both a form of instructional support to scaffold explicit teaching and as a material support to scaffold learners to produce written outcomes which align with the specific features of the compare-and-contrast genre. It was designed by the researcher specific to the key features of the compare-and-contrast genre (Graham & Harris, 2018; Santangelo & Olinghouse, 2009) and with consideration of research into effective compare-and-contrast instruction (Macarthur & Philippakos, 2010). It was written as one set of model expectations alongside a set of suggested avoidances. This is consistent with Vygotsky's argument that instruction geared towards the upper threshold leads development (Smagorinsky, 2011). Moreover, the rubric narrowly focuses on content (ideas relevant to similarities and differences) and organisation (the structure of the compare-contrast genre), and includes a primary trait subscale (compare-contrast cue word usage) (Hamman & Stevens, 2003; Raphael & Kirschner, 1985). The identification of key elements to be included as well

as materials and instructional protocols to be used stemmed directly from the steps involved in constructing a rubric which would allow for exploration of changes in writing outcomes and behaviours with the targeted participants. The initial instructional rubric (Appendix O) formed the basis for explicit teaching of the compare-and-contrast genre in the Baseline Phase.

Initial Rubric	Revision
Used terms <i>identify, inform, A and B, topics, discuss, hook, and main body</i>	<p>Revision 1:</p> <ul style="list-style-type: none"> Substituted terms <i>name, tell, things and talk about</i> Added <i>an interesting sentence</i> as alternative to <i>hook</i> Added <i>middle</i> as alternate characterisation of <i>main body</i>
Organised Main Body by <i>theme paragraphs or block paragraphs</i>	<p>Revision 2:</p> <ul style="list-style-type: none"> Clearly differentiated structural organisation choices and criteria as <i>point-by-point or block</i> format
Used term <i>summary statements</i> to describe Conclusion criteria	<p>Revision 2:</p> <ul style="list-style-type: none"> Expanded description of Conclusion criteria to show three elements: <i>summarise most important similarity and difference, and, tell reader why they are important</i>
Main Body did not include criteria “adding details”	<p>Revision 3:</p> <ul style="list-style-type: none"> Added criteria relevant to <i>adding details to support similarities and differences</i>
Conclusion criteria includes <i>tell the reader why similarities or differences are important</i>	<p>Revision 3:</p> <ul style="list-style-type: none"> Clarified by adding <i>give your personal opinion</i>
Included Introduction criteria of <i>using a sentence or hook to get the reader interested</i>	<p>Revision 4:</p> <ul style="list-style-type: none"> Clarified by adding <i>This is a hint at your personal opinion</i>
Separate anchor chart used for cue word reference	<p>Revision 5:</p> <ul style="list-style-type: none"> Integrated Compare-Contrast Cue Words into Main Body section of rubric

Table 2: Revisions to Rubric Over Course of Intervention

Over the course of the study intervention the rubric underwent a series of amendments made in response to researcher observations and participant feedback with the aim to maximise the consistency between the learning objective, the key components to be taught and the expected outcomes. These revisions are summarised in Table 2, above. Key considerations were whether the segmentation of the rubric tasks matched the order, language and content of the instructional protocols; whether the individual tasks were small enough to avoid overwhelming the participants; and, whether support materials were aligned with the rubric and instructional protocols and also offered clear and adequate modelling.

The first set of amendments followed Group A's initial introduction to the paper-based rubric in the Intervention Phase. As a result of discussion, the language was simplified ("name" instead of "identify"; "things" instead of "topics", "tell" instead of "inform). After Group A practiced writing a conclusion using the paper-based rubric, the language was further amended to break the conclusion section down into a summarisation of both the main similarity and main difference and a statement telling the reader why such are important. Also, the main body section was altered to provide a more detailed explanation and to delineate the different organisational and content expectations with respect to utilising either the point-by-point or block structure. Subsequent to Group A's Harry Potter/Lord Voldemort sample later in the Intervention Phase, two further amendments were made. The first added the criteria that the similarities and differences discussed should be supported by details from the text. The second reflects continued participant difficulty composing a conclusion. Thus, the rubric expectation was revised to define the element of a personal opinion statement telling the reader why the summarised similarity and difference matters.

Subsequent to Group B's introduction to the paper-based instructional rubric, a lack of clarity with respect to how participants understood the term "hook" in the introduction was evident.

Thus, a further revision included an explanation which defined “hook” as a hint at the writer’s personal opinion. Additionally, observational field notes showed that participants were only referencing the instructional rubric when prompted by the researcher and suggested that the participants were struggling to handle all of the different papers (planning on scrap paper, box of cue words, text and writing). Thus, the paper-based instructional rubric was again revised to fit within one page which included the text box of cue words and all criteria. After each revision the paper-based instructional rubric was updated in the participant writing folders to be used during the writing process.

The Intervention

The intervention followed a comparative multiple-baseline design (Kazdin, 2011; Kratochwill et al., 2013; Murphy & Bryan, 1980) and consisted of progressing each group of participants through a series of phases over the course of one school term. As detailed in Appendix A and summarised in Figure 1, below, both groups began with a Blind Sample Phase. Group A participated in Baseline and Intervention Phases whereas Group B participated in Baseline, Delayed Baseline and Intervention Phases. Both groups completed the study intervention with an Independent Sample Phase.

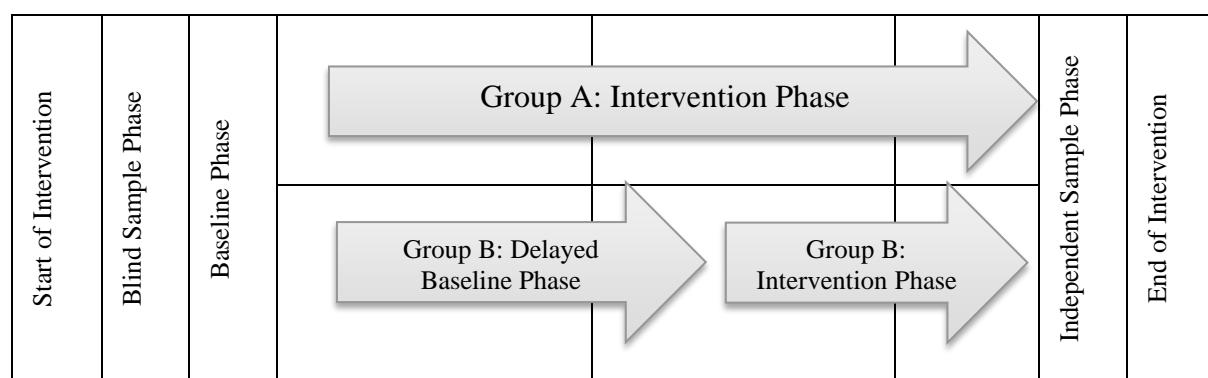


Figure 1: Multiple Baseline Intervention Progression

Overall, 27 sessions were held, with some absences (Appendix Q). Each group received instruction according to the same protocols and in similar environments using the same paired texts and topics for writing. The same two dependent variables were measured using the same instrument (the rubric) throughout all phases. This established a basis for comparison (Murphy & Bryan, 1980).

Blind Sample Phase

The first phase of the study intervention, the Blind Sample Phase, served as a pretest measure of writing achievement in the compare-and-contrast genre. Participants were provided with the learning objective which was to write an essay which describes the similarities and differences between two things. They were also provided with two prepared texts about grizzly bears and polar bears. The researcher read these out loud while the participants were invited to follow along, take notes on scrap paper, or make notes on a graphic organiser containing three columns: grizzly bear differences / similarities / polar bear differences. The participants were then directed to write for fifteen minutes and advised that the researcher would not answer questions or help them during the writing period. At the end of the session the planning sheets and writing samples were collected. The purpose of this phase was to establish participant writing behaviours and achievement prior to either explicit rubric-based genre instruction or provision of the paper-based rubric as an external material scaffold.

Baseline Phase

Each group began the Baseline Phase on the same date and continued for seven 20-minute sessions. The purpose of the Baseline Phase was to collect data relevant to behaviours and outcomes coincident with the delivery of explicit rubric-based instruction in the compare-and-contrast genre according to a protocol (Appendix R), but prior to provision of a paper-based rubric for external reference during the composing process. The researched-created rubric was

used to guide instructional delivery. This explicit rubric-referenced instruction included explanation, modelling and practice. The participants were not provided with a copy of the paper-based rubric during this phase; however, a list of cue words was placed in individual participant folders as a material scaffold during the Baseline and Delayed Baseline Phases. The cue word list was later incorporated into the paper-based rubric (Appendix P). During the Baseline Phase, rubric-based instruction used the model text topic apples and bananas and included strategies related to how to identify the facts and themes needed to write compare-and-contrast essays, how to plan and organise the information into an introduction, main body and conclusion, and how to transfer the plan into a piece of writing. The expression of ideas or facts as direct comparisons or contrasts, and not simply as independent facts about one thing or the other, was identified as a key genre element, with examples of how to “match” the facts, for example, to compare colour to colour and not colour to shape.

During the Baseline Phase the researcher also engaged each group of participants with the task of revising the explicitly taught elements of compare-and-contrast writing by co-constructing a list of key points to use when planning. A typed version of this was posted alongside the learning objective where the participants could reference it while planning during the first two Baseline Phase sessions.

Over the third and fourth sessions of the Baseline Phase participants were guided through the process of collaboratively writing an essay comparing birds and butterflies. The group co-constructed a chart of ideas for similarities, differences and themes or points and then practiced writing an essay. The researcher provided brief written feedback between the two sessions. These notes identified genre elements used appropriately and included a suggestion for each participant to work on in the following session. In the remaining four sessions of the Baseline

Phase participants completed two writing samples on the topics of Ancient and Modern Olympic Games, and Lemons and Oranges.

During the Baseline Phase, the instructional protocol was altered in response to observed participant difficulties understanding the distinction between stating facts and making direct comparisons and contrasts, and independently identifying points of comparison. The focus shifted to teach the participants how to read the texts for matched facts and then organise these into comparisons and contrasts, as well as to how to use the block format, an organisational structure more independently accessible to them. Further, in response to observations that the participants were struggling to produce text in quantity, the reference to a prescribed number of paragraphs was eliminated. In general, during the Baseline Phase, the use of the rubric-based instructional protocol highlighted gaps in participant understanding and progress, leading to responsive revisions to both explicit instruction and the paper-based rubric [Table 2, p. 46].

Delayed Baseline Phase

There was a time lag between the introduction of the Intervention Phase for Group A and Group B (Barlow & Hersen, 1984). As Group A entered the Intervention Phase, Group B continued to receive rubric-based explicit instruction in the compare-and-contrast genre during a Delayed Baseline Phase. The intent was to identify changes in writing behaviours or outcomes observed during a longer period of repeated explicit rubric-based genre instruction and writing practice for comparison with changes observed when participants were provided with the paper-based rubric as an external material support during the third phase, the Intervention Phase.

The Delayed Baseline Phase followed the instructional protocol used in the Baseline Phase (Appendix R). The first session of each week involved revision of the elements needed for effective compare-and-contrast writing, followed by the researcher reading the paired texts out loud. Group B then collaboratively identified similarities and differences, and discussed how

to effectively plan, and were then given two-to-three sessions to write a compare and contrast essay. The topics for these samples were Harry Potter and Lord Voldemort, and Spiderman and Superman.

Intervention Phase

In the Intervention Phase participants continued to receive explicit genre instruction informed by the rubric (Appendix R). However, they were also provided with an additional level of scaffolding, an external schema, the paper-based rubric. This material tool reinforced the oral scaffolding provided by the researcher. The intent was to assist participants to independently manage the key part-whole tasks required to meet the expectations of the compare-and-contrast text genre. The participants received explicit instruction in the use of the paper-based rubric according to a protocol (See Appendix S). They were encouraged to use the paper-based rubric to focus on the transfer of ideas (similarities and differences between provided topic items) and other genre elements (comparison cue words, block or point-to-point structure) into their writing outcomes. The elements of the compare-and-contrast genre as set out in the paper-based rubric were discussed at the start of every session to reinforce prior learning, address any lack of understanding, and to clarify task expectations and requirements. The purpose of this phase was to identify changes in behaviours or outcomes when using an external, material version of the rubric as compared to changes shown when using the rubric to guide teaching, to include observation of any evidence of memorisation or internalisation of the compare-and-contrast genre skills taught in the Baseline and Delayed Baseline Phases.

Group A started the Intervention Phase in Week 3. Group B started the Intervention Phase in Week 5 after completion of the Delayed Baseline Phase (Appendix A). Due to the absence of two out of three Group A participants, the first Intervention Phase session was adapted into a one-on-one planning instruction with Rachel. In the following three sessions with all three

Group A participants, the paper-based rubric was presented and explained. The participants were encouraged to ask questions regarding the language and structure in the rubric. The instructional protocol continued to engage the group in discussions comparing a model text (bikes versus cars) to the elements of the rubric. A similar protocol was followed for the first week of Group B's Intervention Phase; however, Group B was presented with the paper-based rubric already amended to reflect Group A's Intervention Phase responses.

In the remaining sessions of the Intervention Phase (Weeks 4-8 for Group A and Weeks 5-8 for Group B), the participants were provided with a set of paired texts each week, explicitly instructed in use of the rubric and in the compare-and-contrast genre, engaged in collaborative planning, given feedback and guidance from the researcher and provided with access to the paper-based rubric during the writing process. Group A started with the topics of Harry Potter and Lord Voldemort, and Spiderman and Superman for their Intervention Phase writing samples. The topics of Rats and Mice and Australia and New Zealand were assigned to both Group A and Group B in the final weeks of the Intervention Phase.

Independent Sample Phase

The final topic (Lions and Tigers) was assigned for the Independent Sample Phase for all participants. As with the Blind Sample Phase, participants were informed of the learning objective. In the Independent Sample Phase, however, they were also provided with a paper-based rubric. The researcher read the texts out loud and the participants were then directed to write independently for fifteen minutes. They were advised that the researcher would not answer questions or help them during the writing period. At the end of the session the planning sheets and writing samples were collected.

Methods of Data Analysis

The writing samples produced by the participants over the course of the study intervention represent a source of raw data. These samples have been quantitised by the assignment of numerical values based on a point-system for evidence of the two dependent variables (a) number of ideas expressed; and (b) number of elements of writing structure and organisation specific to the compare-and-contrast genre included. The resulting numerical scores on each dependent variable are expressed in chart or tabular form and presented in Chapter Four (Riley-Tillman & Burns, 2009). The results were then visually analysed (Kratochwill et al., 2013; Parsonson & Baer, 1986) to identify changes, patterns or trends for each case study and across participants throughout the study intervention (Kratochwill, 2013), and for consideration of a functional relationship between measured changes and the study intervention (Riley-Tillman & Burns, 2009).

Visual and thematic analysis of the entire corpus of data further explores the nature and impact of instructional rubric use throughout the study intervention. First, such serves to corroborate changes in writing behaviours as measured against observations, participant perspectives and artefact evidence. Second, such offers clarification or explanation for paradoxes, contradictions or fluctuations in the data. The analysis was guided by Braun & Clarke's (2006) step-by-step guide (p. 35) as well as by their 15-point checklist (p. 36).

Legitimation Measures

This study was run by a single researcher. In order to manage the skills and time required to collect and analyse the data, a small sample size and duration were chosen (Creswell & Plano Clark, 2011). Additionally, the researcher-created materials were untested (Ary, Chest, Jacobs, Sorensen & Walker, 2019; Gresham, Macmillan, Beebe-Frankenberger & Bocian, 2000), and there was no provision in the design for external or corroborative checks of data collection or

analysis. The integrity of intervention delivery, transcription accuracy and scoring accuracy in this study were wholly dependent upon one researcher's skills, reliability and consistency. Several strategies were therefore used to support the legitimation of this mixed-method research design.

First, to ensure that the study measured the two independent variables identified in the research questions, key terms such as rubric, idea, and genre elements, as well as the instruments used to measure outcomes for these variables, are clearly defined. The transparent use of one instrument, the rubric, throughout all phases of the research study adds validity to the measurement of the variables as well as the relevance of qualitative observations and the data analysis procedures. Moreover, in recognition of the potential difficulty of integrating qualitative and quantitative data in a mixed methods approach (Creswell & Creswell, 2018), certain qualitative data was quantitised to allow for valid comparison (Greene, Caracelli & Graham, 1989). To minimise the possibility of bias the participant sample for the collection of quantitative and qualitative data is the same both in number and composition (Creswell & Plano Clark, 2011).

Second, this researcher used a rich and detailed description of the setting, participants, researcher role, data collection and analytical processes (Merriam, 1988; Tashakkori and Teddlie, 2010). The instructional components of the study intervention were conducted according to protocols (See Appendices R & S) to ensure that the materials and implementation procedures were the same for all participants (Tashakkori & Teddlie, 2010). To minimise possible bias (Cohen et al., 2007), the interviews were conducted using a semi-structured format. This allowed for a consistency in the types of questions being asked while also affording the researcher the ability to tailor the interview to ensure that the questions were understood and that the participants had the opportunity to express their perspectives or make

additional comments. Care was also taken to consider research guidelines for the conduct of interviews, in general, and, with children (Cohen et al., pp. 366-367; 375-376, 2007) to ensure that the participants were comfortable with the process. These measures also allow for some degree of replication of study results to attempt parallel findings. Third, the adherence to strict ethics guidelines and procedures and the documentation of decisions relevant to research design, data collection and analysis, to include the reflective notes of the researcher lend trustworthiness to the study (Baxter & Jack, 2008).

Finally, credibility is established in two ways. One way is through the use of member checking. All of the interviews and a number of the study intervention sessions were recorded. The participants had the opportunity to review the interview transcripts for accuracy. Also, the recorded study intervention sessions allowed the researcher to corroborate observations held in memory or written in field notes (Tashakkori & Teddlie, 2010). A second way credibility was established was in the choice of a mixed methodology itself. This ensured that both measurable outcomes and rich descriptions of usage were collected as data in order to create a larger picture of the phenomenon under study (Onwuegbuzie et al., 2011). Some of the raw qualitative data was quantitised and other qualitative data was coded thematically to allow for analysis as to frequency of themes and to corroborate the quantitative results. This combination of meaning and number strengthens the analytical findings in the study (Onwuegbuzie & Teddlie, 2003).

Chapter Summary

The use of a multiple baseline case study design and a mixed methodology allowed for a deep investigation of the research questions relevant to instructional rubric use. The boundaries of this study were six Year 8 New Zealand Intermediate School learners with writing difficulties. These learners participated in an eight-week writing intervention which used an instructional rubric to scaffold instructional design and delivery and to then serve as an external reference

tool during the writing process. Ethical, validity and reliability measures were carefully considered and applied in the planning, intervention application and data collection for this study. Attention focused on clearly defining all variables and providing extensive and detailed descriptions of the case studies throughout the study intervention. Multiple approaches to data analysis with integration at the findings stage then yielded rich descriptive data relevant to the research questions.

Chapter Four: Research Findings

Introduction

This chapter begins with a narrative description of six individual case studies based on a consideration of transcribed student- and teacher-participant interviews, field notes of observations and quantitative data derived from writing samples. The participant responses to the pre-intervention interviews, along with ongoing observational notes were used to assess the ZPD of each participant and differentiated instructional needs. The quantified writing sample data formed the basis for a comparison of changes in writing outcomes throughout different study intervention phases. The field notes of observation and all interview responses support the analysis of possible explanations for changes in both writing outcomes and behaviours. In particular, the post-intervention participant interview responses enhance researcher observations as to which aspects of the writing process were impacted by instructional rubric use. The results of the teacher interviews corroborate researcher observations and assessment of participant ZPDs as well as offering anecdotal evidence of changes in writing behaviours outside of the study intervention conditions. Following the presentation of the individual case studies, trends across cases are identified. The chapter closes with a summary.

Individual Case Studies

Adam

Adam is a quiet Year Eight male. In the pre-intervention interview he reported that he liked to write and characterised himself as a good writer. He qualified this by acknowledging that writing could be challenging for him. He stated that he only liked certain topics, such as writing recounts or fiction stories, and said that writing about topics he does not like is hard. This perspective is consistent with researcher observations made during the study intervention such

as the lack of expression on Adam's face, his limited verbal participation in planning and learning discussions, and several instances where he asked how much time was left in the session and/or in the overall study intervention.

In the pre-intervention interview Adam defined good writing as the use of descriptive words and "nice" sentences. He stated that he had used brainstorms to plan his writing and that he used his plans during writing. He also noted that he had used "worksheets" such as the "hamburger" in class and that it had helped him. He defined features of compare-and-contrast writing as "descriptive words or key adjectives" and defined a rubric as "...stuff you need to work on." In the post-intervention interview Ms Brown expressed the opinion that Adam is, in fact, a more capable writer than evidenced by his written work. This is consistent with early researcher observations of Adam's ability to make and follow a plan and to focus and utilise feedback to improve his writing.

Adam attended a total of twenty-three sessions during the study intervention. He consistently started on the assigned tasks quickly and independently and worked for the full length of each session he attended. Observation during a read-to-self task revealed him to be a slow reader in comparison to the remainder of his group. He followed along as the researcher read the paired texts aloud and responded affirmatively when offered the option of having the paired texts re-read. His handwriting is small and even, with evidence of neat cross outs, restarts and insertions made during the writing process. Although he did not ask for clarification during most of the sessions, he listened attentively to the instructional dialogue and made an effort to respond to written researcher feedback or verbal prompting while writing. In particular, he adopted the researcher's suggestions for planning and managing his composition using a self-created Venn chart to organise topic similarities and differences.

For the Blind Sample Adam re-read the paired texts to himself and then took notes on the supplied graphic organiser using complete phrases. He was focused and worked steadily. The researcher did not observe him referencing the graphic organiser while writing. Adam's Blind Sample was presented in paragraphs and complete sentences. There was no evidence of use of a compare-and-contrast structure such as block or point-by-point organisation. He did not include an introduction or a conclusion or any direct comparisons or contrasts. Adam did use a cue word or phrase; after a paragraph relating facts about grizzly bears, he wrote, "Polar bears are much different to that." Although this evidenced an understanding of the stated learning objective, Adam's Blind Sample is otherwise an example of knowledge telling where he recounted a series of facts about grizzly and polar bears using language and sequencing similar to the paired text. This is consistent with his inability to define key features of compare-and-contrast writing at the time of his pre-intervention interview.

Adam's two Baseline Phase writing samples demonstrate a growing understanding of the compare-and-contrast genre. Figure Two shows a comparison of the number of ideas Adam expressed as facts to the number of ideas he expressed as direct comparisons or contrasts out of the number of ideas made available for each topic across the study intervention. It reflects that Adam made six and seven direct comparisons and contrasts in his two Baseline Phase samples.

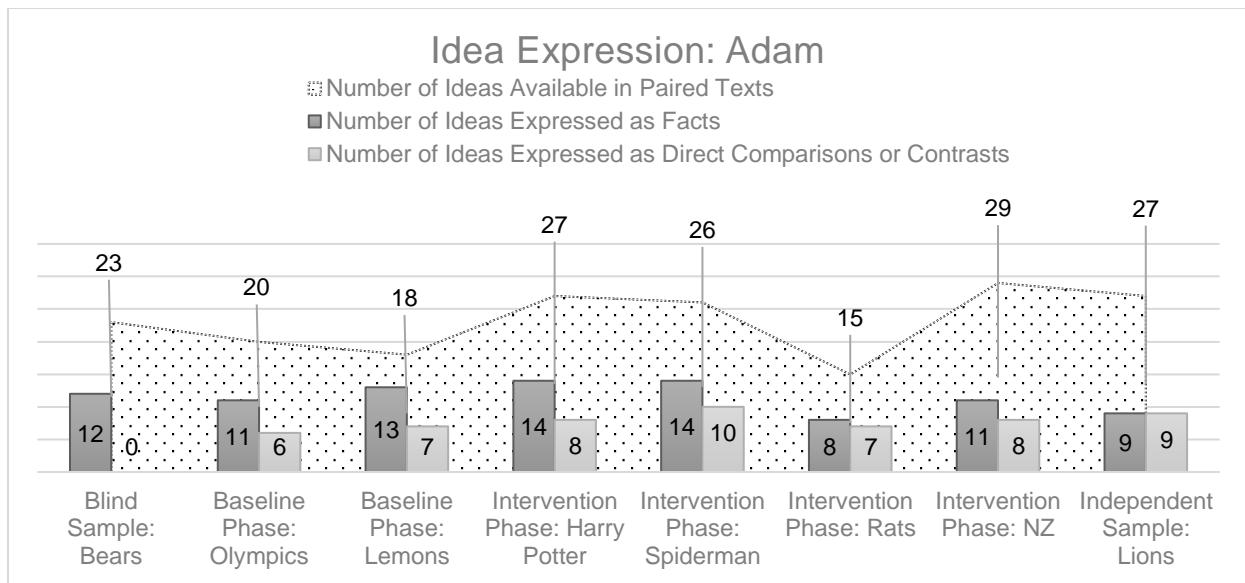


Figure 2: Idea Expression - Adam

Figure 3 shows that Adam used one and eleven cue words, respectively, when writing his Baseline Phase samples, and demonstrates that he continued to use an increased number of cue words to support his comparisons and contrasts throughout the study intervention.

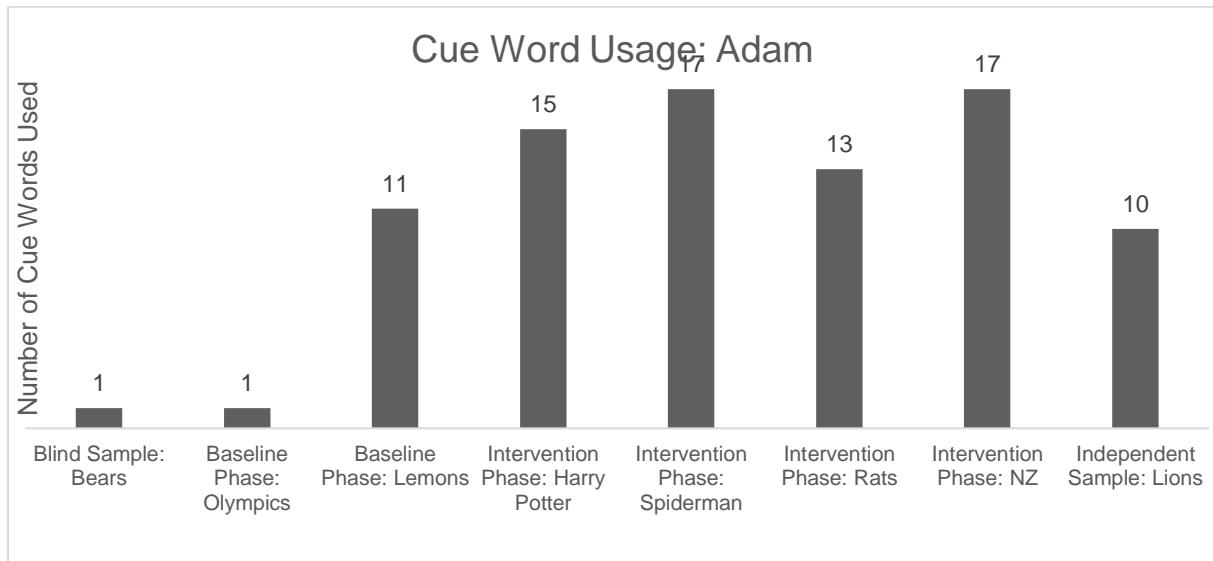


Figure 3: Cue Word Usage – Adam

Figure 4 shows an increase in Adam's use of eleven key compare-and-contrast genre features over the course of the study intervention.

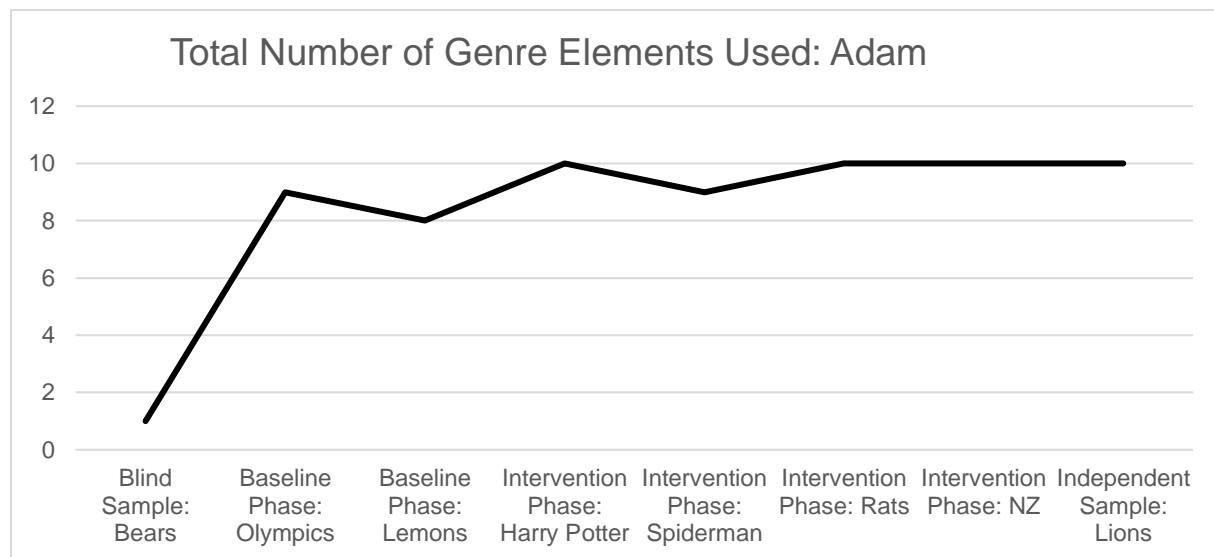


Figure 4: Total Number of Genre Elements Used – Adam

As discussed, Adam's Blind Sample did not reflect good understanding of the compare-and-contrast genre elements. Figure 4 shows a jump in genre element use in the Baseline Phase. Specifically, in his Baseline Phase samples Adam included an introduction paragraph which identified the topic and the purpose of comparing and contrasting. He also included a conclusion paragraph which summarised the ideas discussed in the main body. This represents a marked difference to his Blind Sample.

During the Baseline Phase Adam still did not utilise a hook or personal opinion statement, and apart from using one separate block of differences in one of his samples, he did not follow a block or point-by-point organisational structure. The shaded cells in Tables 3, 4 and 5, set out below, indicate participant use of a particular genre element. Table 3 relates to the use of a hook in the introduction. Table 4 relates to the use of a personal opinion statement in the conclusion. Table 5 tracks the use of either a block or point-by-point organisational structure.

These tables will be referenced with respect to each individual case study as well as the across-case trends.

Adam								
Peter								
Rachel								
Intervention Phase / Topic	Blind Sample: Bears	Baseline Phase: Olympics	Baseline Phase: Lemons	Intervention Phase: Harry Potter	Intervention Phase: Spiderman	Intervention Phase: Rats	Intervention Phase: NZ	Independent Sample: Lions
Theo				Delayed Baseline Phase: Harry Potter	Delayed Baseline Phase: Spiderman			
Kade								
Nancy								

Table 3: Timeline for Implementation of Use of Hook in Introduction Paragraph

Adam								
Peter								
Rachel								
Intervention Phase / Topic	Blind Sample: Bears	Baseline Phase: Olympics	Baseline Phase: Lemons	Intervention Phase: Harry Potter	Intervention Phase: Spiderman	Intervention Phase: Rats	Intervention Phase: NZ	Independent Sample: Lions
Theo				Delayed Baseline Phase: Harry Potter	Delayed Baseline Phase: Spiderman			
Kade								
Nancy								

Table 4: Timeline for Implementation of Use of Personal Opinion Statement in Conclusion

Adam								
Peter								
Rachel								
Intervention Phase / Topic	Blind Sample: Bears	Baseline Phase: Olympics	Baseline Phase: Lemons	Intervention Phase: Harry Potter	Intervention Phase: Spiderman	Intervention Phase: Rats	Intervention Phase: NZ	Independent Sample: Lions
Theo				Delayed Baseline Phase: Harry Potter	Delayed Baseline Phase: Spiderman			
Kade								
Nancy								

Table 5: Timeline for Implementation of Block or Point-by-Point Structure

Adam listened attentively to feedback relevant to mixing points of comparison within paragraphs and attempted to separate them during his Baseline Phase writing practice. During

Week Three (Intervention Phase), Adam verbally demonstrated an understanding of what he needed to include in his essay. He demonstrated another increase in the number of genre elements used during this phase. By Week Four he could state the three elements of a conclusion without referencing the rubric. In Week Five the researcher noted that Adam appeared to have internalised the purpose of compare-and-contrast writing and its traits. During this week Adam was observed to be checking items off the rubric as he composed. Throughout the Intervention Phase Adam continued to include an introduction which identified the topic and the purpose of comparing and contrasting. He also started to include a hook, or statement to interest the reader, in his introductions (Figure 4, Table 3). In all of the Intervention Phase samples he presented ideas as direct comparisons and contrasts (Figure 2). He also included a conclusion summarising his main body discussion and, in three of his Intervention Phase samples, he offered the reader a personal opinion (Table 4). He also consistently used at least ten cue words in his writing (Figure 3). At times Adam was prompted to refer to the rubric to check whether he had included the necessary genre elements. Adam demonstrated some difficulty in crafting a conclusion and requested clarification on distinguishing factual reporting from directly comparing and contrasting two things.

The greatest change seen in Adam's writing during the Intervention Phase was the consistent organisation utilising the block method (Table 5). In Week 7 Adam was still mixing block similarities and differences within paragraphs. However, he attempted to use separate paragraphs to discuss the similarities and differences between the two subjects within each topic.

When writing his final Intervention Phase sample (Australia/New Zealand), Adam was observed to self-create a detailed planning sheet. For his Independent Sample Adam was able to produce a compare-and-contrast essay which included ten out of the eleven elements

identified as part of the learning objective on the rubric (Figure 4). He included a hook and a personal opinion, used cue words to effect comparisons and annotated his paper to denote “same paragraph” and “differ paragraph.”

Adam expressed the most interest in the topic Spiderman and Superman, presented during the Intervention Phase. He showed little engagement with the other participants during the group discussion and collaborative planning on this topic. Despite being able to quickly form an opinion as to his preferred hero in discussion with the researcher, Adam did not include either a hook or personal opinion in this writing sample (Tables 3 & 4). Also, although Adam produced his highest number of direct comparisons and contrasts in this sample, he did not utilise the majority of the ideas made available in the paired texts (Figure 2). At one point, Adam expressed to the researcher that when there were too many ideas or too many facts within a text it became overwhelming for him. Consistent with this, he did not express more ideas, either as facts or as direct comparisons or contrasts, coincident with the topics with a higher number of available ideas. For example, when writing about Lemons and Oranges, Adam used thirteen of the eighteen ideas available. However, he used a maximum of fourteen ideas in any essay despite the availability of between twenty and twenty-nine ideas for some topics (Appendix N).

Throughout the study intervention, Adam’s organisation of ideas gradually shifted away from factual recounting. In his Blind Sample he made no direct comparison and contrasts. In his Baseline Samples roughly only half of his ideas were written in terms of a relationship between the two topic subjects. The ratio of facts to comparisons decreased throughout the Intervention Phase (Figure 2). In the Independent Sample all of Adam’s ideas are set out as direct comparisons and contrasts. He was also observed to independently plan and use his planning to write this sample.

In his post-intervention interview Adam defined compare-and-contrast writing as when you “compare....one thing and then describe the other.” He answered yes when asked if the rubric made writing easier, noting that “you can.... see where you need to work on.... what you need to do and if you don’t got it it’s there for you.” He replied that he would “maybe” use a rubric for writing if it was provided. At the time of the post-intervention interview, Ms Smith reported that Adam does not like writing. She indicated that after each study intervention session Adam did not want to carry on with his in-class writing. She also stated that during regular classroom writing, unless it was sports-related, Adam did not appear to be engaged with writing. She stated, however, that Adam seemed to be getting more ideas down on paper and was using a lot of different words in his writing as compared to prior to the study intervention.

Peter

Peter is a Year Eight male described in the post-intervention interview by his literacy teacher, Ms Smith, as an individual who does things “on his own terms.” In his pre-intervention interview Peter stated that he did not like to write but he preferred recounts to other types of writing. He replied in the negative when asked if he was a good writer and identified punctuation and spelling as key elements of good writing. He acknowledged that getting ideas could be difficult and that handwriting was sometimes hard. This is consistent with field notes observing periodic hand shaking, sighing, tapping, facial movements and vocalisation throughout the entire course of the study intervention. At the time of the pre-intervention interview, Peter expressed no prior understanding of the compare-and-contrast genre, telling the researcher he did not “...even know what contrast means.” He also claimed no knowledge of rubrics and told the researcher he did not use planning tools to help his writing.

During the study intervention Peter showed a reluctance to use planning strategies, worked plans or the paper-based rubric while writing. He only rarely engaged in group planning discussions, offering a short answer when no one else came forward. At times he would not respond, even when directly questioned. He often pre-read the paired texts and would begin writing before the group discussion. He would frequently check with the researcher to confirm the meaning or spelling of a vocabulary word. He appeared to work from memory, only infrequently looking at the paired texts. He did periodically re-read his written draft before continuing and would, for the most part, write the entire time without prompting. Peter was not responsive to feedback or suggestions. On one occasion he wrote, “Answer: No” on the feedback note in his folder and passed it to the researcher.

On the date of the Blind Sample Peter took notes on the graphic organiser provided by the researcher using phrases to record similarities and differences as key facts. He started writing before the other participants. The researcher did not observe him referencing his plan during writing but he did reference the paired texts. He frequently tapped his fingers or his pen, made noises with his mouth, shook his hand or looked around and sighed during the session. Peter’s sample was presented in paragraphs and complete sentences. He included direct comparisons in his Blind Sample, contrasting the hibernation habits and sizes of grizzly bears and polar bears. He used the cue word “while” to affect these contrasts. He did not otherwise follow any discernible structure or organisation, to include not having a clear introduction or conclusion.

During this study Peter attended a total of twenty-five sessions. Peter’s Baseline Phase samples show an increase in the number of genre elements included when compared to his Blind Sample (Figure 5).

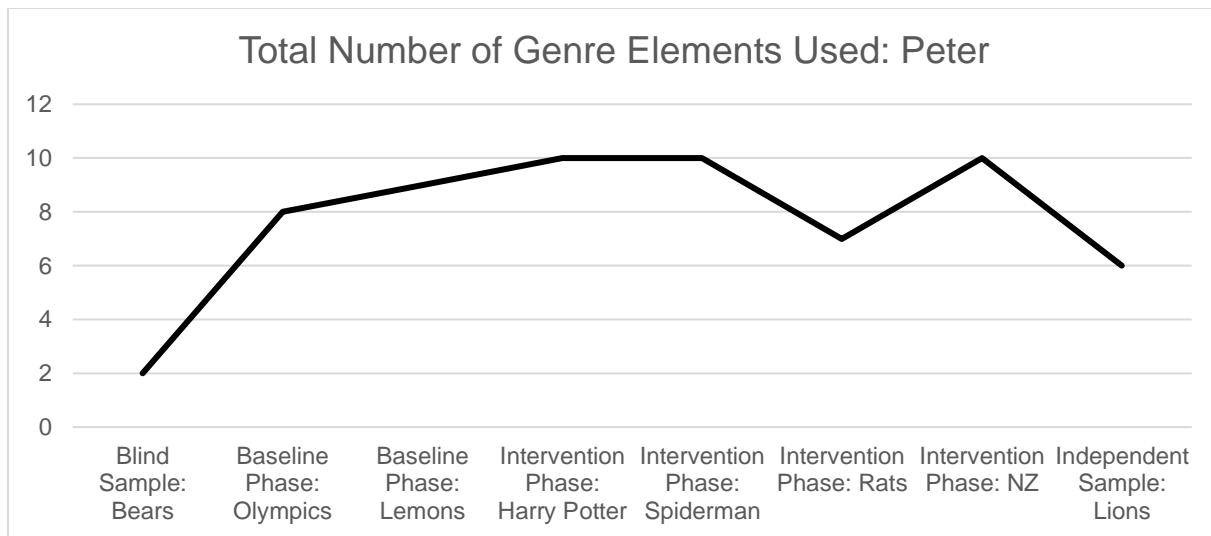


Figure 5: Total Number of Genre Elements Used - Peter

In his Baseline Phase samples Peter included a clear introduction and conclusion which met the criteria of identifying the topic, stating the purpose of comparing and contrasting, and summarising the main body discussion. He did not use a hook or a personal opinion (See Tables 3 and 4, p. 61). In only one of his Baseline Phase samples did Peter organise his ideas into separate paragraphs describing the similarities and differences (See Table 5, p. 61). During week two of the Baseline Phase Peter was able to verbally tell the researcher what structure should be used to write a compare and contrast essay.

In Week Three, the Intervention Phase, the researcher asked if the paper-based rubric placed in the writing folders would be helpful. Peter replied “middle.” He stated that he read the paired texts twice and then remembered what he needs to use in his writing. Peter’s use of three particular genre elements decreased during the Intervention Phase: the number of similarities and/or differences discussed (Figure 6), the number of cue words used (Figure 7), and the organisational structure (Table 5).

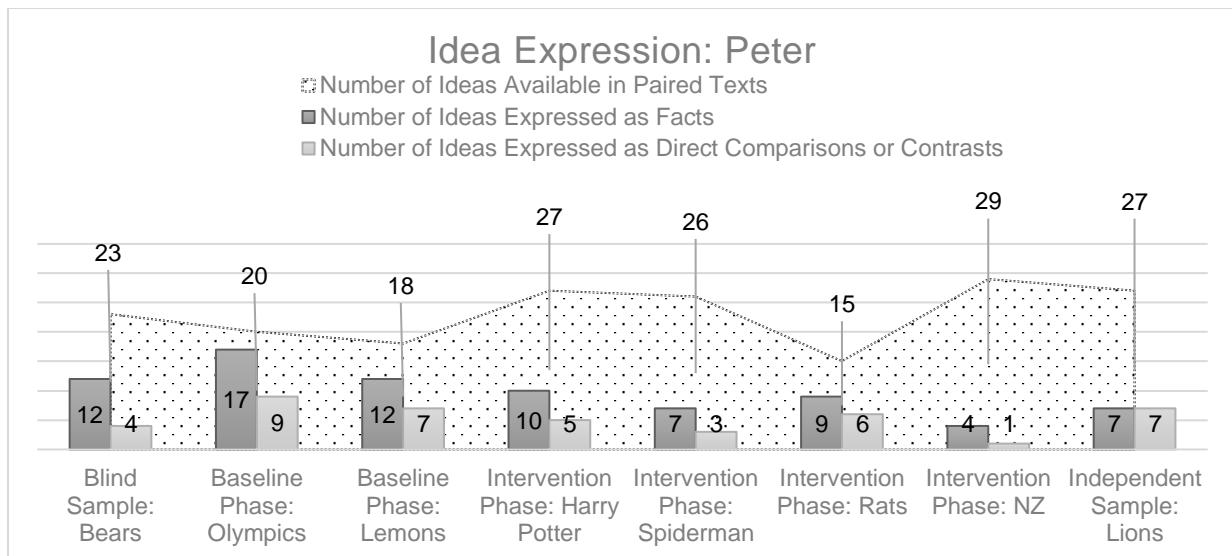


Figure 6: Idea Expression - Peter

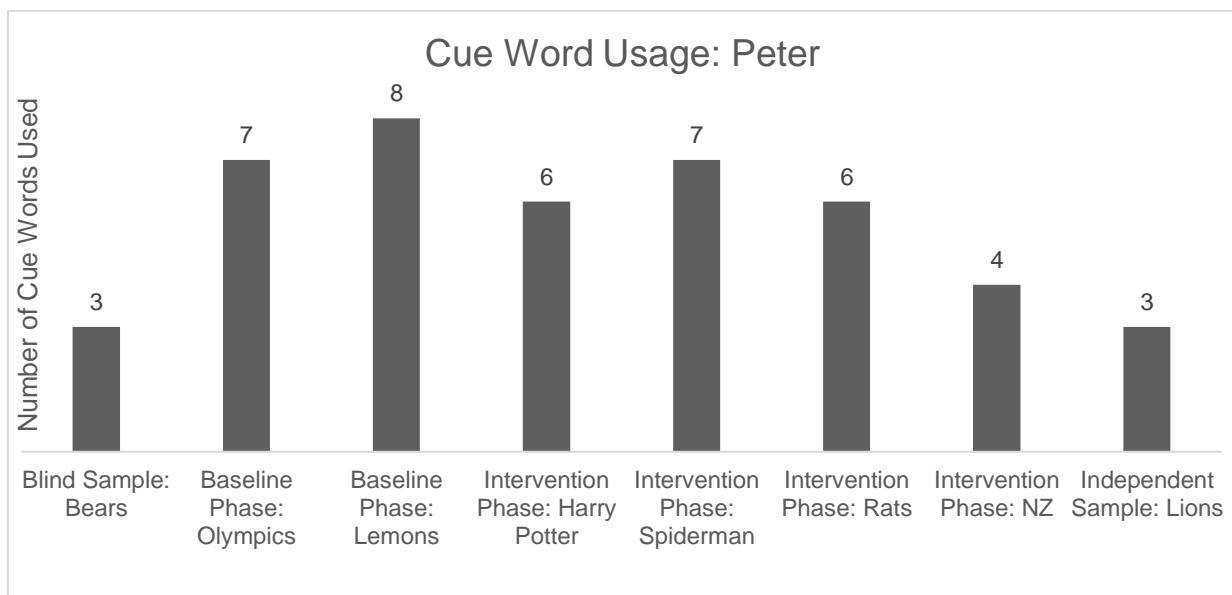


Figure 7: Cue Word Usage - Peter

For one topic Peter produced only one direct comparison or contrast (Figure 6). In only one sample did he have a clear block of differences (Table 5). Also, in both Week Six and in the final Independent Sample, Peter did not include any conclusion paragraph. Throughout the Intervention Phase Peter appeared to remember pairs of facts from the provided texts and was able to identify and use similarities and differences during his composing process. In Week 7 Peter was still mixing block similarities and differences within paragraphs. When prompted to

use the rubric, he responded by verbally reciting the components of compare-and-contrast writing; he did not, however, refer to the rubric while writing.

Peter expressed the most interest in the topic Spiderman and Superman. He was still reluctant to engage with the researcher or his peers and wrote independently on this topic. He expressed only seven ideas in his composition. Of those, only three were presented as direct comparisons and contrasts. Peter wrote a maximum of seventeen ideas (Figure 6) for any topic; only nine of those ideas were expressed as direct comparisons and contrasts.

Peter's writing samples can be described as conversational. He presented the information as if he were engaged in a discussion with a friend, with many sentences starting with "you know" or "did you know." He demonstrated a strong descriptive vocabulary and tended to utilise commonly known facts or experiences to engage the reader. He is not shy about injecting his personal opinions and beliefs into his writing. The paragraphing evident in his samples does not follow a structural organisation of facts into similarities and differences or points. This is evident in his Independent Sample where he made some comparisons and contrasts and offered personal opinion without following any clear organisational paragraphing structure or sequence (See Table 5). During the study intervention Peter largely appeared to be writing from his personal knowledge. This is supported by his inclusion of ideas not available in the paired texts and not discussed collaboratively. The researcher repeatedly observed his lack of openness to feedback, tool usage or following up on verbal or written suggestions.

Peter's Independent Sample shows an increase in the overall number of genre elements included as compared to his Blind Sample (Figure 5). At the time of the post-intervention interview, Peter stated that the purpose of the compare-and-contrast genre was to "know the difference...and how they're the same." He stated that you needed to include a hook, an

introduction.... middle, conclusion and a personal voice.” When asked whether the rubric made writing easier or better Peter replied that a rubric helps to “know what to add and to take away.” He still reported that he did not like to write and did not think he was a good writer; however, he acknowledged that if he was stuck, he could look at a paper-based rubric to remember what to add.

At the time of the post-intervention interview Ms Smith noted that “not much has probably changed” with Peter and described his attitude as doing, “what suits him.” She did note his increased use of paragraphing and that he had done some editing in the samples. She also acknowledged that Peter was doing more planning and would use such to base his paragraph on. Although she reported an improved willingness to “actually do writing, and to get writing onto paper, she noted that Peter still struggled with expanding his ideas and actually getting all those ideas out and onto paper. She also made the observation Peter would “prefer to skate under the radar rather than really show full potential.”

Rachel

Rachel is a shy, Year Eight female. She is a twin, with her brother also participating in the study. She told the researcher that she “sometimes” likes writing, preferring creative writing, but stated that writing is difficult for her. She specified it was hard to think of ideas and also that she finds spelling, punctuation, getting words down on paper, handwriting and revising hard. At the time of the post-intervention interview her literacy teacher, Ms Smith, confirmed that writing is a struggle for Rachel. At the time of the pre-intervention interview Rachel did not identify herself as a good writer, defining good writing as including the correct punctuation and being persuasive. She did not know what compare-and-contrast writing was and had not heard of a rubric. She reported that she used scrap paper to help her plan her writing.

Rachel attended a total of twenty-five sessions during the study intervention. She often seemed unsure what to do or how to begin. The researcher provided additional verbal and written scaffolding for Rachel throughout, often working one-on-one to encourage her to write something. Her difficulties with spelling, punctuation, sentence structure and grammar were evident and interfered such that often Rachel's writing did not make sense. She was amenable to help, to include in the form of written feedback or being prompted to use her planning or the rubric. Only infrequently did she evidence self-regulation in the form of re-reading her draft, improving her planning, referencing her planning or asking the researcher for clarification. Overall, she seemed to have difficulty understanding instructions, despite the researcher's efforts to repeat, rephrase, duplicate and present such in both verbal and visual form.

On the date of the Blind Sample Rachel re-read the paired texts, sometimes using her pen to track with the text, and then entered single words on the graphic organiser. She frequently appeared distracted or lost, looking back and forth from the paired texts to her writing. She looked at her graphic organiser once when writing the headings for grizzly bear and polar bear on her writing paper. Rachel's Blind Sample was presented as two paragraphs, following the structural format of the paired texts provided. She included facts about grizzly bears in the first paragraph and facts about polar bears in the second paragraph. There were no direct contrasts or comparisons between the two topics. The sample also lacked evidence of the use of cue words, an introduction or a conclusion. Rachel appears to have simply copied facts from the paired texts.

At the end of Week Two Rachel contributed to a Baseline Phase discussion about the elements of the compare-and-contrast genre, making an effort to recall what was needed in the introduction, main body and conclusion. As shown in Figure 8, during this phase Rachel's writing samples show a marked increase in the inclusion of genre elements.

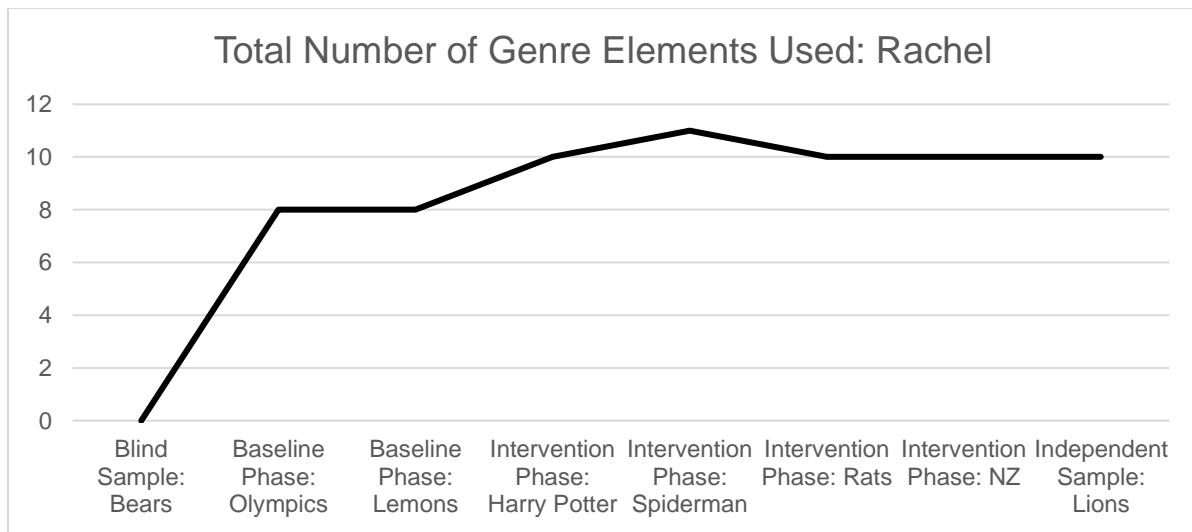


Figure 8: Total Number of Genre Elements Used - Rachel

Rachel showed attempts to utilise a paragraph structure to organise her ideas and to make comparisons and contrasts (See Table 5, p. 61). She required additional support to understand how to use the facts provided in terms of making direct relationships as to how two things are similar or different. Rachel continued to struggle with adding in her personal voice in the form of an introductory hook or a personal opinion statement in the conclusion throughout the study intervention (Tables 3 & 4, p. 61).

In the Intervention Phase Rachel was able to consistently include an introduction which identified the writing purpose and named the two things to be compared and contrasted. She also included a conclusion and attempted to summarise the ideas discussed in the main body. Rachel was further able to make direct comparisons and contrasts using cue words (Figures 9, 10).

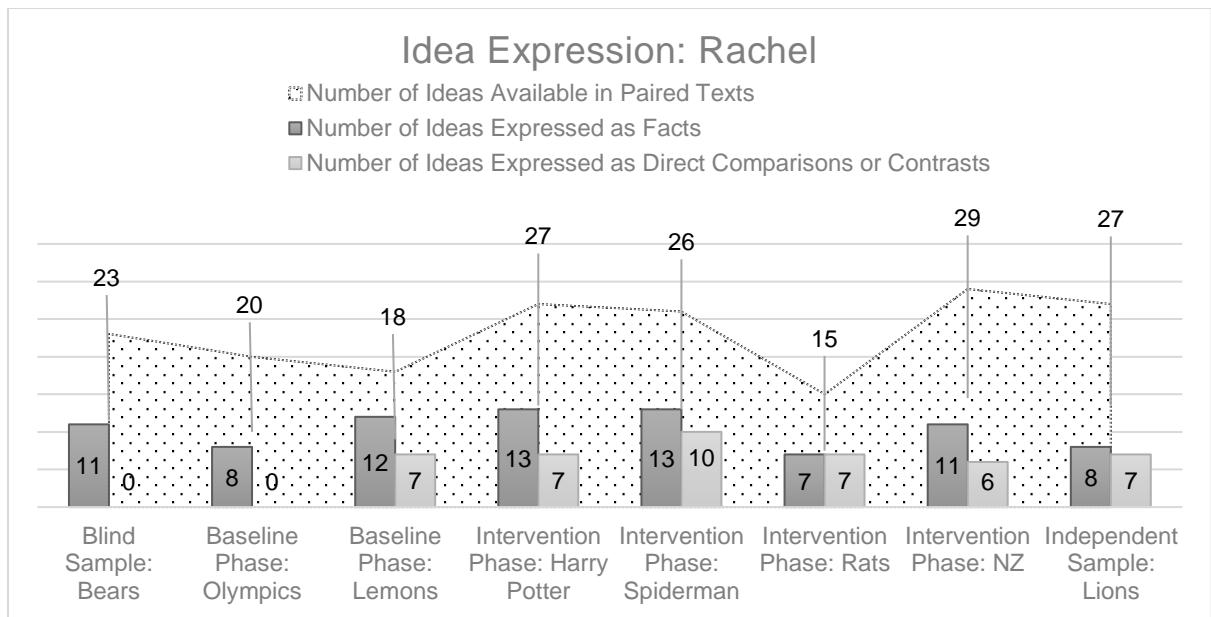


Figure 9: Idea Expression - Rachel

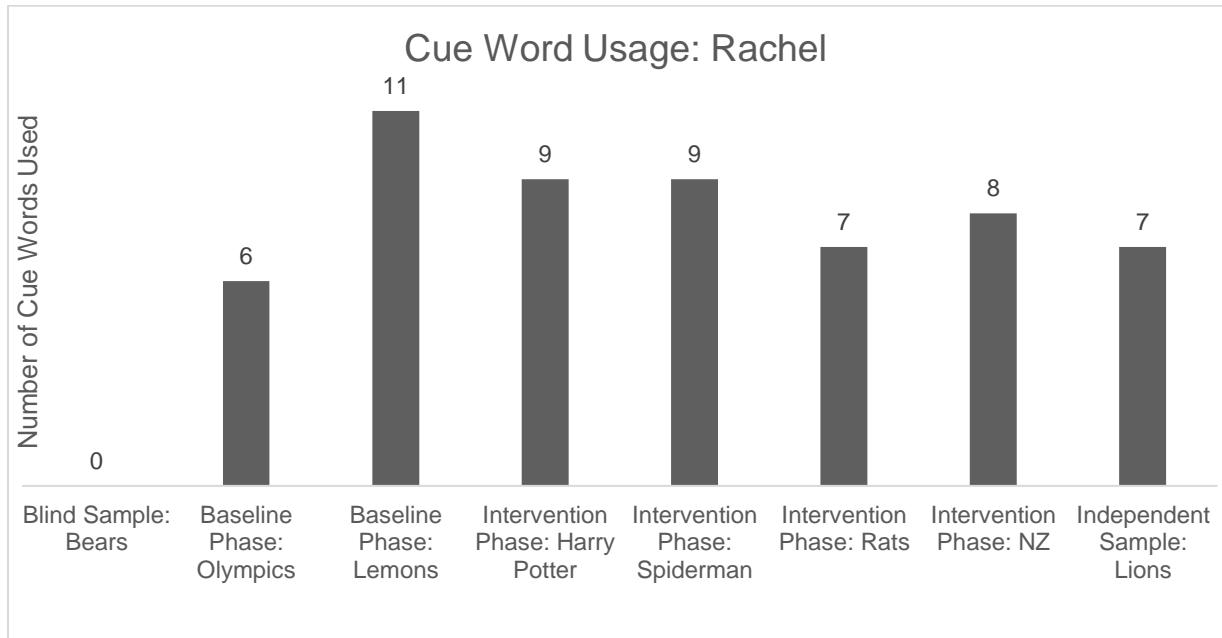


Figure 10: Cue Word Usage - Rachel

Rachel continued to struggle to consistently organise her comparisons and contrasts into a block or point-by-point format, often mingling similarities with differences but without any point of comparison (See Table 5, p. 61). She expressed that she had a hard time deciding which ideas to use, even when provided in the paired texts, and stated that it was hard to identify points of comparison to use the point-by-point structure. She also evidenced difficulty

understanding and effectuating the inclusion of a personal opinion statement in her conclusion. She told the researcher that planning was boring and was unable to identify the elements of compare-and-contrast writing without prompting.

In Week Three Rachel indicated that having a copy of a paper-based rubric in the writing folders would be helpful. Throughout the Intervention Phase and when writing her Independent Sample, Rachel was observed to reference the paper-based rubric sixteen times. She made the highest number of references during the Independent Sample, checking the paper-based rubric before proceeding to the next sentence or when shifting from the main body to the conclusion. In Week 7 Rachel still required prompting or visual reference to the rubric to identify compare-and-contrast genre elements. At the end of the Intervention Phase Rachel continued to struggle to write a conclusion.

In the weeks where Rachel had less writing time due to absences, her samples included less ideas than weeks when she had full attendance. Rachel used her highest number of ideas (thirteen) for the topic Spiderman; ten of those were worded as direct comparisons and contrasts (Figure 9). Throughout the study intervention, Rachel showed an improvement in how she organised ideas. In her Blind Sample she made no direct comparison and contrasts. Only one of her Baseline Phase samples reflects ideas written in terms of a relationship between the two topic subjects. In her Independent Sample seven out of eight of her ideas are set out as direct comparisons and contrasts (Figure 9).

Rachel was observed to have difficulty completing the Independent Sample, even with access to the paper-based rubric. She expressed concern that she would not be given any help during the session. She was able to plan her work using highlighting and a column chart and to address many of the rubric criteria. She included an introduction with a hook, a main body organised

into block paragraphs of direct comparisons and contrasts made using cue words, and a conclusion. She was observed to frequently reference the paired texts and the paper-based rubric. In the post-intervention interview she noted that the rubric specifically helped her with the “...block.... like at the start you do like the similarity and then you do the difference.”

In her post-intervention interview Rachel had difficulty spontaneously describing any features of compare-and-contrast writing. This is consistent with memory issues observed by the researcher during the study intervention as well as the post-intervention comments made by her literacy teacher that Rachel did not always remember what she was supposed to do or what she needed to say when writing. With prompting Rachel was able to identify the needs for paragraphs of similarities and differences, the need to tell the audience what you’re writing about and the need to summarise and make a conclusion. Rachel said a rubric was something “you can look at, back and forward” and that when she was stuck “with something then I can always look at it.” She also indicated it made her writing better because it “learned me how to use that compare and contrasting word....is that the cue words....and.... paragraphs and stuff.” When asked if it made writing easier, she replied that it helps her to “it just tells me what to do” and particularly commented that she found the way it was set up “quite easy”. She stated she would use a rubric if given one by her teacher.

One of the most evident improvements in Rachel’s writing over the course of the study intervention was her developed use of paragraphing. Her literacy teacher noted that this was also evidenced in Rachel’s classroom writing. Ms Smith noted that prior to the study intervention Rachel “was pretty much doing no writing and now she’s actually doing some writing, which has been good.” She reported seeing more planning and that sometimes Rachel would use that planning and organise her paragraphs. She noticed an improvement in quality even though Rachel still struggled with expanding her ideas and getting them on paper.

Theo

Theo is a social Year Eight male. He is a twin; his sister participated in Group A. One of his good friends participated alongside him in Group B. At the time of the pre-intervention interview Theo reported that he did not like writing. When asked if he thought he was a good writer he responded, “a little bit.” He defined good writing as writing that is interesting, and has good spelling and punctuation. Theo recognised that writing is difficult for him, reporting that “the full stops and the capital letters and the punctuation” are hard. He also said that he found it difficult to find ideas or think of the right words to write. In the post-intervention interview his literacy teacher, Ms Brown, confirmed that writing has been a significant struggle, specifically that Theo has difficulty holding ideas in his head long enough to write them down. Theo told the researcher that he had used scrap paper as a tool to write but did not like to brainstorm on paper, only in his head. He did not appear to know any features of the compare and contrast genre or to be familiar with rubrics.

On the date of the Blind Sample Theo appeared very unsure. He asked a lot of questions, such as whether he was allowed to look at the paired texts and how to use the graphic organiser. At the end he asked the researcher if the session could be longer. Theo’s Blind Sample was presented as two paragraphs, following the structural format of the paired texts provided. He included facts about grizzly bears in the first paragraph, although he did not identify them as grizzly bears, just “bears.” He then recited facts about polar bears in the second paragraph. There were no direct contrasts or comparisons between the two topics. The sample also lacked evidence of the use of cue words, an introduction or a conclusion. Theo appears to have copied facts from the paired texts. This is consistent with his pre-intervention interview where he evidenced no understanding or prior knowledge about the compare-and-contrast genre and that he has difficulty thinking of what to write and how to get it down on paper.

During this study Theo attended a total of twenty-four and one-half sessions. During the sessions he often seemed unsure what to do or how to begin. The researcher provided additional verbal and written scaffolding for Theo throughout, often working one-on-one to encourage him to write something. A typical form of scaffolding would be to elicit a conversational expression of what Theo wanted to say, followed by the researcher restating the idea in different ways. Not only did Theo still struggle to write a complete sentence down on paper, his grammar and sentence structure issues interfered with the overall sense, making his writing difficult to follow. His handwriting is characterised by strike-throughs and cross outs and is sometimes difficult to read. He was engaged in the instruction and always amenable to feedback, prompting or suggestions. He was an eager participant in group planning discussions, particularly when he was interested in or had prior knowledge of a topic. He evidenced some self-regulation in the form of asking the researcher for clarification or assistance. During the first two Baseline Phase sessions the researcher observed him spontaneously checking against the co-constructed compare and contrast list to guide his steps when planning. Overall, he seemed to have difficulty understanding instructions, despite the researcher's efforts to repeat, rephrase, duplicate and present such in both verbal and visual form.

Theo demonstrated an initial increase in the use of genre elements during the Baseline Phase (Figure 11).

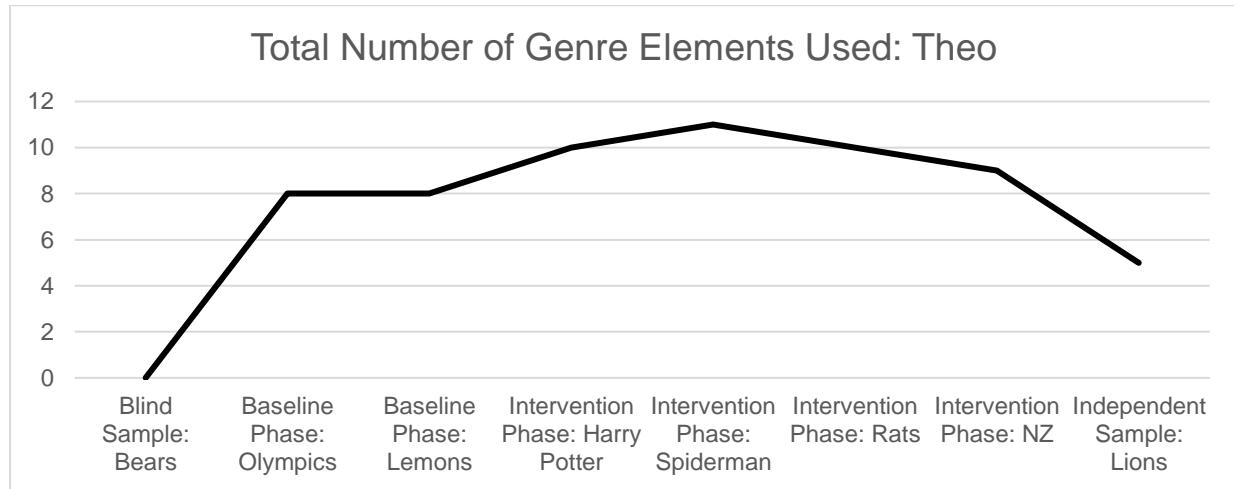


Figure 11: Total Number of Genre Elements Used – Theo

Theo's Baseline, Delayed Baseline and Intervention Phase samples reflect a fairly consistent inclusion of an introduction which identified topic and purpose and a conclusion which attempted to summarise the ideas discussed in the main body (See Table 5, p. 61). He also consistently used cue words starting from the Baseline Phase (Figure 12) when he was provided with a cue words anchor chart to use while writing.

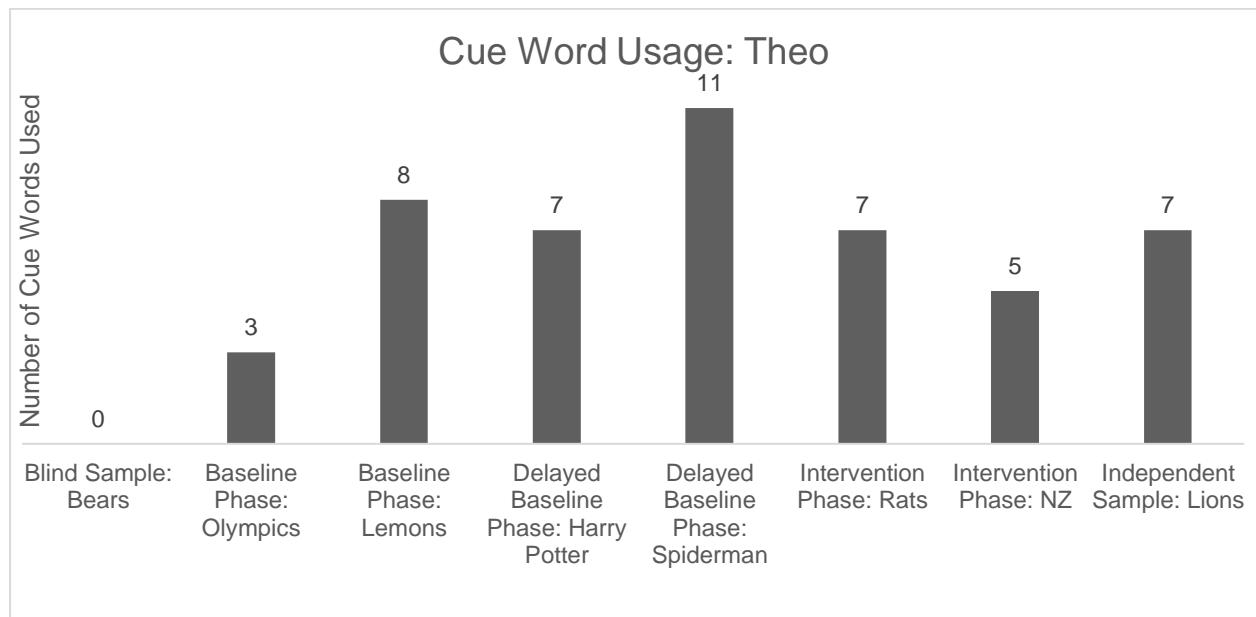


Figure 12: Cue Word Usage - Theo

Theo's personal voice (Table 4, p. 61), organisation of facts into block or point-by-point format (Table 5, p. 61) and synthesis of facts into direct comparisons and contrasts (Figure 13, below) developed more slowly.

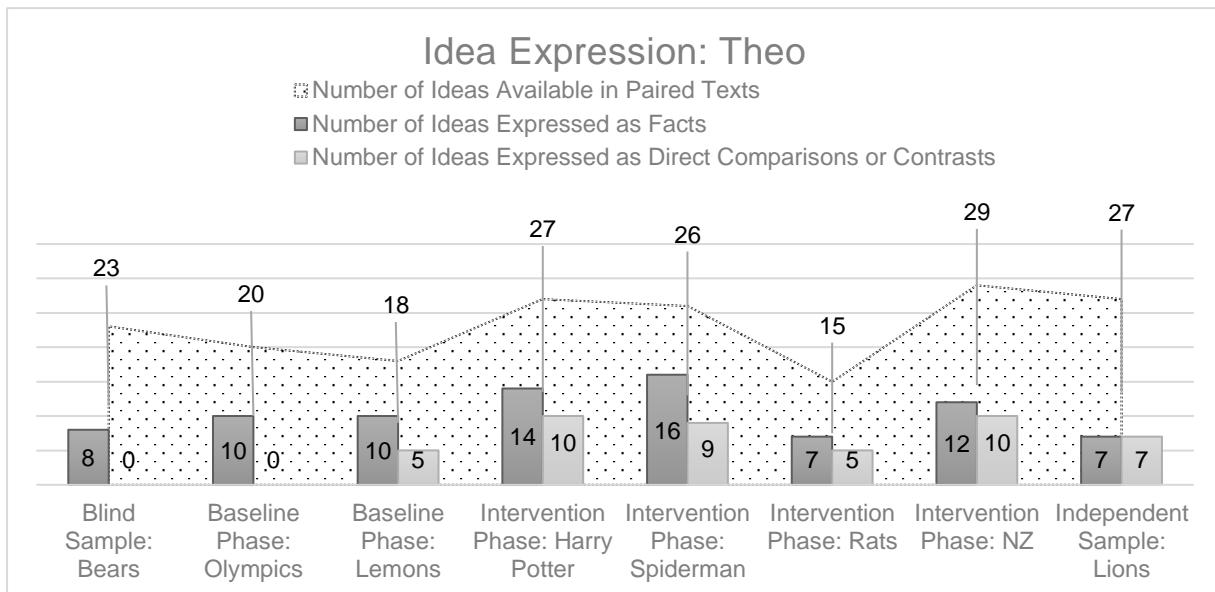


Figure 13: Idea Expression - Theo

During the Baseline Phase Theo did demonstrate understanding of the genre purpose, specifically how the use of the point-by-point format could help focus the reader on important aspects of the topic instead of just providing them with a list of facts. His use of these genre elements increased, but he demonstrated some variability in consistently meeting the genre expectations during the course of the study intervention. Theo also required prompting to express his ideas in full sentences when writing. In the Baseline and Delayed Baseline Phases he would often reread the whole text anytime he needed a new idea. During the Intervention Phase, Theo demonstrated an increase in the time used for planning. Also, during the Intervention Phase, he commented that planning “splits stuff up” and would return to his written plan to add ideas. He reported that writing was getting easier, that he was “getting an

order.” For his Intervention Phase sample (Australia/New Zealand) Theo self-created a columned planning sheet outlining the similarities and differences found in the paired texts.

Theo used the highest number of genre elements during the Delayed Baseline Phase when writing on the topics of Harry Potter and Lord Voldemort and Spiderman and Superman (Figure 11). He expressed both prior knowledge and high interest in these topics and contributed significantly to the group discussion. He was able to contribute information about the characters without relying on the paired texts. In his Delayed Baseline writing samples Theo attempted to use paragraphs, included an introduction which named the topic and sometimes identified the purpose of the writing. He included a conclusion paragraph with a summary statement and his main body included some direct comparisons or contrasts. Theo decided to use the point-by-point structure even though he stated that it was difficult to organise his writing that way. He was noted to use the group’s organisational plan and, with prompting, to refer to his own plan while writing. He marked what he had already done and then read the plan to identify his next step. Field notes of observations during this time reflect that Theo was able to recite some of the genre traits when asked by the researcher during the session. He continued to use a chart of cue words, which was placed in his folder, as well as the group planning chart which was posted at the head of the conference table. Theo continued to evidence difficulty following through with the use of a block or point-by-point structure, sometimes mixing the two and other times not using any identifiable structure (Table 5, p. 61). He instead wrote down his ideas as they came to him.

In the Intervention Phase Theo’s overall number of genre elements decreased when compared to his Delayed Baseline Phase samples (Figure 11). He continued to struggle to remember and organise his ideas and to transfer them into complete sentences within a recognisable compare-and-contrast structure. His Intervention Phase samples still show marked improvement

compared to his Blind Sample in which he did not include any traits of the compare and contrast genre. Theo produced his highest idea expression on the topics of Harry Potter and Spiderman. He expressed a maximum of sixteen ideas throughout the study intervention. Theo demonstrated an improvement in his organisation of ideas as direct contrasts and comparisons rather than simply recounting facts (Figure 13). In his Blind Sample and his Baseline Phase samples he made no direct comparison and contrasts. The ratio of ideas presented as facts to ideas presented as direct comparisons decreased throughout the study intervention Phase and in the Independent Sample all of his ideas are set out as direct comparisons and contrasts.

In the Independent Sample Theo was observed to reference the paper-based rubric during writing. He began by creating a planning chart. He was able to make seven direct comparisons and contrasts with a clear block of similarities organised into one paragraph. In the Independent Sample Theo used cue words and included a conclusion paragraph which summarised the major similarity between lions and tigers. Theo is the only participant who failed to include an introduction paragraph which identified the purpose of his essay in the Independent Sample. This is consistent with evidence that he continued to struggle to focus and capture his ideas in writing. He also struggled to finish within the time limit.

Post-intervention Ms Brown reported that writing was still a struggle for Theo. Despite noting continuing challenges for Theo in writing, Ms Smith remarked that his increased quantity of writing and use of paragraphs was “quite amazing.” The researcher also observed that over the course of the study intervention Theo was writing more and trying to use a plan.

There were early indications during the study intervention that Theo perceived the paper-based rubric as useful. He enthusiastically referenced the front-of-class co-constructed list of compare-and-contrast points early in the Baseline Phase. Then, in Week Six, the Intervention

Phase, he said the writing was getting easier, he was “getting an order.” Of the Group B participants, Theo referenced the paper-based rubric the most times, particularly during his Independent Sample. On one occasion Theo placed his writing paper right under the line of the paper-based rubric for the first element of an introduction and then followed along. In the post-intervention interviews Theo stated that a rubric helped “because if I’m stuck, I can go back on it”. When prompted for an example he replied, “it says, like, two differences and then it has two similarities. At this time Theo was able to identify the “block method” as one way to write a compare-and-contrast essay.

Kade

Kade is a social and cheerful Year Eight male. At the time of the pre-intervention interview he described himself as “...a pretty independent person” who “sometimes” likes to write. He was asked if he thought he was a good writer and replied, “nope” with a facial grimace. He identified writing as hard when he didn’t know what to write about and also indicated that spelling could be hard. For Kade good writing is “putting punctuation in the right place” and “lots of detail.” He reported using brainstorms to write. When asked about the compare and contrast genre Kade asked, “is contrast like opposite of trying to make the same?” and told the researcher you would need to write different things about the same thing to write a compare-and-contrast essay. He defined a rubric as a “sheet.”

During the sessions Kade was attentive and eager to engage in group discussions. He self-managed well in that he asked for clarification and help when needed, sought feedback from the researcher and took it on board without any negative energy. His handwriting is fluent and legible. From the outset Kade was able to quickly grasp and then articulate the learning goal and take steps to achieve it.

On the date of the Blind Sample, Kade took notes while the paired texts were read. The researcher observed his change in facial expressions as the texts were read, to include his gasp when he learned how much bears could weigh. He studied the graphic organiser before he started writing and was very focused. Prior to the end of the session he appeared to struggle to think of anything else to say and asked how long it was until the session finished. He did not make any revisions on his work. Kade's sample was presented in paragraphs and full sentences. It was structured as a narrative, to include the use of an introduction paragraph which set the scene: "One afternoon in a forest deep deep beyond human barrier's [sic] lived 2 very vicious [sic] type's [sic] of unknownen [sic] bread's [sic]. Kade continued to note some commonalities between two different kinds of bears and also identified the purpose of comparing and contrasting two things. This is consistent with his pre-intervention Interview description of compare-and-contrast writing as when you "...write different things about the same thing." His main body paragraphs related facts about grizzly bears and polar bears under separate headings without making any direct comparisons or contrasts. Kade used richly descriptive language and similes ("claws were as sharp as a shining blade" and "feet flat as oars"). He did not include a conclusion, a personal opinion or cue words. Kade's narrative style and addition of creative details suggested that he was able to engage with the presented topic beyond mere knowledge telling but that he was unfamiliar with or needed further instruction and practice to match his writing style with the genre purpose and learning objective.

During the study intervention Kade attended twenty-seven sessions. In the first few sessions of the Baseline Phase Kade indicated how useful knowledge of the genre would have been in writing the Blind Sample and was able to give the researcher additional examples that would be suitable for inclusion in the model text. He demonstrated a marked increase in the inclusion of genre elements in the Baseline Phase (Figure 14, below).

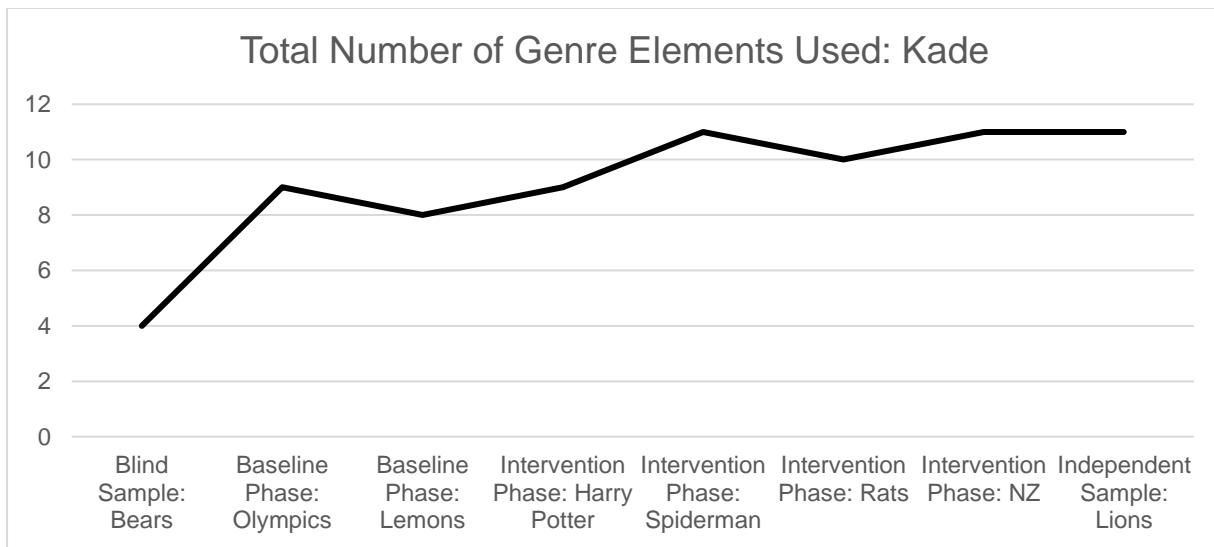


Figure 14: Total Number of Genre Elements Used - Kade

Kade required scaffolding during the Baseline and Delayed Baseline Phases to distinguish what information to put in the introduction versus in the main body. In the Baseline and Delayed Baseline Phases he developed his writing by increasing the number of direct comparisons and contrasts as well as the number of cue words he used to do so (Figures 15 & 16).

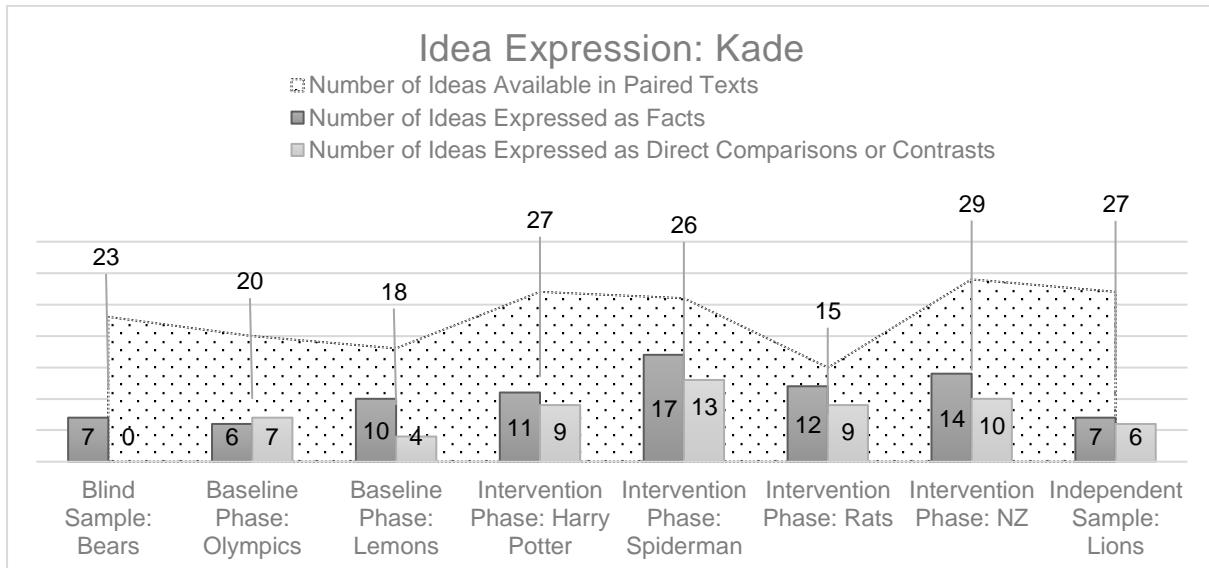


Figure 15: Idea Expression - Kade

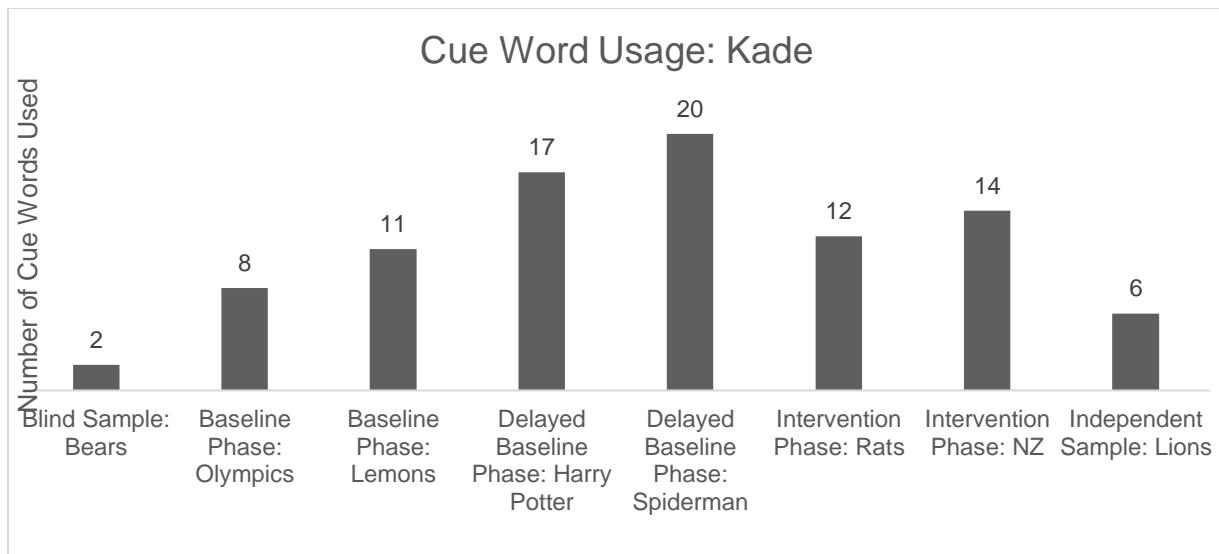


Figure 16: Cue Word Usage - Kade

Kade specifically sought clarification on how to use themes to identify points of comparison. He also developed the ability to include a personal opinion in the conclusion and to be sure to introduce a hook to interest his readers (Tables 3 & 4, p. 61). Kade's increased use of genre elements remained high during the Intervention Phase. He was able to orally discuss these elements without prompting from the researcher or paper-based aids. He used a self-created planning sheet to identify and organise similarities and differences from the paired texts. Kade did not develop a consistent organisational structure either by block or point-by-point format during the Intervention Phase (Table 5, p. 61). He continued to weave facts into a narrative not separated either by point of comparison or similarities and differences.

Kade showed increased engagement with the topic Spiderman and Superman during the Delayed Baseline Phase. He expressed his highest number of ideas (seventeen) on this topic; thirteen of those were written as direct comparisons or contrasts (Figure 15). He was observed to be more engaged and detailed in his planning when collaboratively discussing the topic with his friend. He continued to demonstrate an understanding that his ideas should be presented in terms of a relationship between the two topic subjects throughout the Intervention Phase. He

stated that he used the block format when he didn't know a lot about the topic. In his Independent Sample six of his seven ideas are set out as direct comparisons and contrasts.

Kade demonstrated a decrease in the number of genre elements included in the Independent Sample (less direct comparisons and contrasts, less cue words) (Figures 15 & 16). He did, however, include a hook, "...I would rather one of these animals more than the other." He also summarised his ideas in the conclusion, using the transition word "overall" and then provided a personal opinion, recommending the reader to choose a tiger over a lion as a "sidekick." In general throughout the study intervention Kade developed and maintained the use of paragraphs, an introduction which identified the topics and the purpose of comparing and contrasting, providing a hook to interest the reader, including a conclusion which summarised and offered a personal voice, using cue words (Figure 14), and framing of facts in terms of direct comparisons or contrasts (Figure 15). He utilised a good organisational structure of block or point-by-point in only three of his writing samples (Table 5, p. 61). Typically, his paragraphs would be a mixture of those two methods.

After the paper-based rubric was introduced and placed in the writing folders of Group A, the researcher asked if it would be helpful. Kade responded in the affirmative and reported that the rubric "explains and shows me what to do." Absent prompting Kade did not reference the paper-based rubric. He was observed to look at his planning and the paired texts. At the end of the Intervention Phase he told the researcher it was getting easier to write because he knew how to "split it up." In the post-intervention interviews, Kade described a rubric as something that "is just basically like a plan that splits, uh, breaks everything down for you." He continued to state it could help with writing because "it tells you name the two things in the introduction and use some compare and contrast words in your main body and stuff." He indicated that it made his writing better because "it breaks it down for me." and it made it easier because "it's

like instructions for what you need to do.” When the researcher asked Kade if he preferred to have the teacher give him a rubric or for the class to create it together, he replied “create it together ‘cause I know what it.... I memorised the rubric.” Kade identified the genre purpose of “telling the reader the difference and the similarities of the two topics.” When asked to name some genre features, he responded:

“...intro, in the introduction, uh, you need to name your two topics, tell the reader that you’re doing a compare-and-contrast story and add your personal voice and a hook. And in the main body.... In the main body part, if you’re doing block method you put all the differences in one and then all the similarities in a different paragraph.”

The researcher asked if there was another method. Kade responded: Oh, point-by-point...You put, um, a similarity, uh, you put like a similarity and a difference in one paragraph, uh...bikes have wheels, so do cars, but they’re different sizes. Kade further identified the need for a conclusion and to summarise what was said, as well as to, “...tell the reader the most, uh, most important difference and similarity that you think there was.”

At the time of the post-intervention interview Ms Brown reported noticing that Kade had been using different words in his writing, that the quantity of his writing had increased, and that he was using paragraphs. She also commented that he was planning more and following his plan and was able to re-read his work in order to keep track of where he was in his writing. She further indicated that Kade had become more focused and engaged in writing. She provided as an example the fact that he usually sat with two of his friends, that he would move away so that he could concentrate on his writing. She noted he was able to get more ideas on paper, start his paragraphs with a topic sentence and add more detail.

Nancy

Nancy is a quiet, shy Year Eight female. She was in Group B with two social and outgoing males. Consistent with Ms Brown's assessment, she presented as diligent and cooperative. She likes writing and is motivated to improve. She reported that finding ideas to write about could be hard and that good writing using interesting words, punctuation, capital letters and "putting a picture in someone else's head." She told the researcher that she used a brainstorm to plan her writing and referenced it while writing. She also noted that posters in the classroom were useful because "people can look at it to see what they need in their writing". When asked if she had heard of compare-and-contrast writing she answered, "a little bit" but was unable to supply further explanation or to identify features and said no to understanding what a rubric was.

During the writing sessions Nancy did not confidently contribute to discussions. At times she would evidence that she knew the answer to a question or had an idea and offer such in a whisper. She wrote for the entirety of each session and was open and responsive to feedback. She quickly adopted the planning strategy discussed in the instructional sessions.

On the date of the Blind Sample Nancy wrote a lot of facts on her graphic organiser. She worked consistently but was slow to produce and appeared to get stuck on what else to write. Nancy recited facts about brown bears under the heading "brown bears." There was no indication of separate paragraphs, introduction, conclusion or any direct comparisons or contrasts between brown bears and grizzly bears. Nancy's sample suggests that she was knowledge telling from the paired texts. She repeated the same facts more than once and may have run out of time to include facts about grizzly bears, indicating needed instruction in how to effectively use her time to plan and then use her plan to meet the learning objective.

During the study intervention Nancy attended twenty-five sessions. She showed an immediate and sustained improvement in the number of genre elements used in her writing during the Baseline Phase (Figure 17).

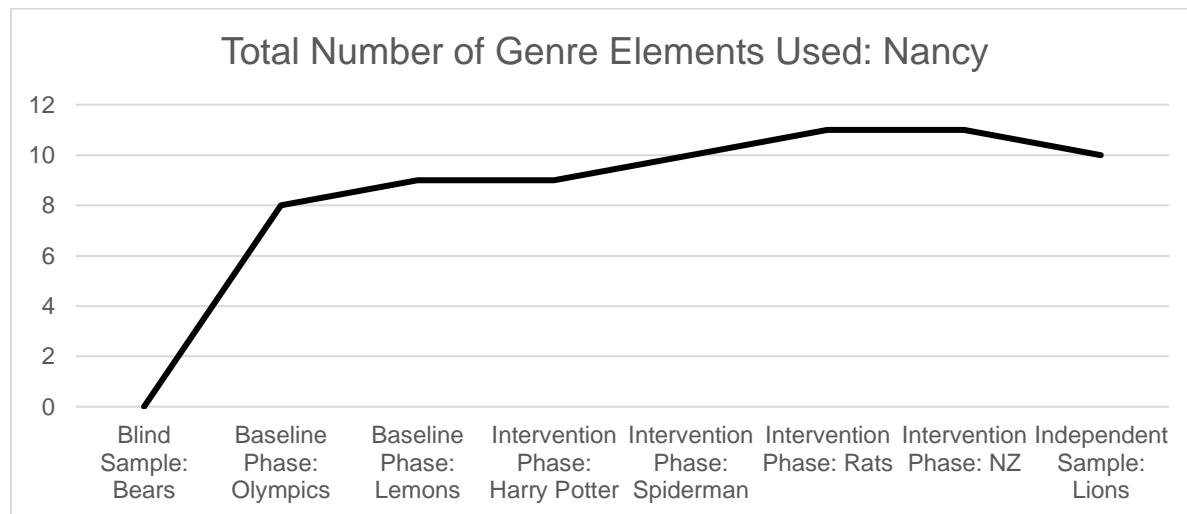


Figure 17: Total Number of Genre Elements Used - Nancy

Nancy's Baseline Phase writing samples demonstrate that she started to use separate paragraphs for an introduction, main body and conclusion. In one sample she made nine direct comparisons and contrasts (Figure 18), using nine cue words to do so (Figure 19). Also, in her introduction she named the topic and identified the compare-and-contrast purpose.

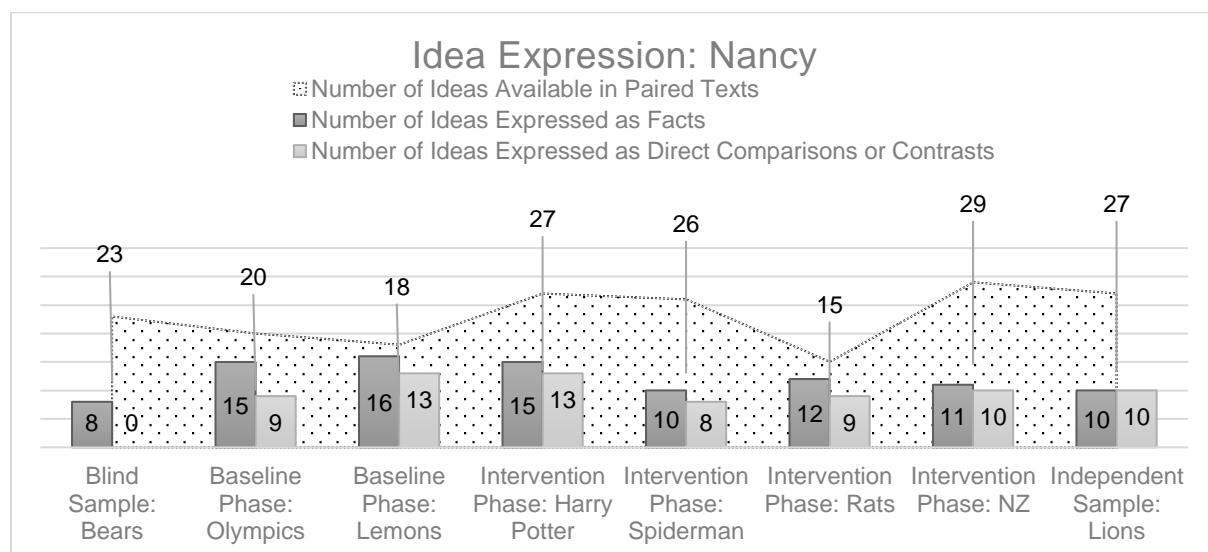


Figure 18: Idea Expression - Nancy

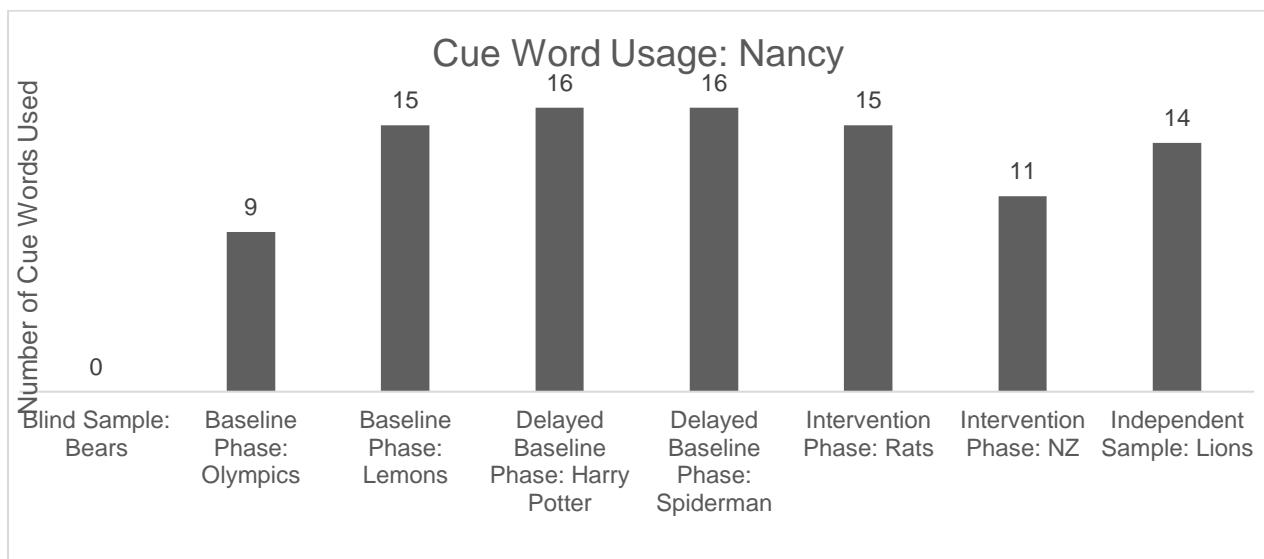


Figure 19: Cue Word Usage - Nancy

Nancy took some time to develop her personal voice and to demonstrate the use of an identified structure to organise her essay (Tables 4 & 5, p. 61). During the Baseline Phase Nancy demonstrated a tendency to merge block and point-by-point format, incorporating more than one point of comparison in a paragraph and talking about both similarities and differences. The researcher noted that Nancy struggled with personal voice, but would clearly listen to feedback given to other participants and to the group discussion and then utilise the suggestions in her own composition. Nancy continued to mix themes within points-of-comparison paragraphs during the Delayed Baseline phase. She appeared to write directly from the provided paired texts without significant planning or annotation. She was given feedback on the difference between block and point-by-point format during this phase.

During the Intervention Phase Nancy started to include a personal opinion statement and to use a block organisational structure. Towards the end of this phase she began to include a hook in her introduction (Tables 3 & 4, p. 61). She was able to maintain her use of genre elements when completing her Independent Sample. In that sample her introduction and conclusion clearly

aligned with the purpose of a compare and contrast essay. She also used direct comparisons and contrasts to express her ideas. Her writing continued to characterised by a lot of repetition of the same idea expressed in nearly the same language. Her personal opinion statements and hook were often derived directly from group discussions rather than her own opinion. Nancy expressed her highest number of ideas (sixteen) on the topic of Lemons and Oranges; thirteen of those were expressed as direct comparisons or contrasts (Figure 18). Nancy's ability to organise her ideas in terms of a relationship between the two topic subjects was evident from the Baseline Phase throughout the remainder of the study intervention. In her Independent Sample, all of her ideas are set out as direct comparisons and contrasts (Figure 18).

After the paper-based rubric was introduced and placed in the writing folders of Group A, Nancy nodded when asked if she thought it would help with her writing. In Week Six Nancy stated that the planning and rubric help because if you forget "you can look". Nancy also told the researcher that she was finding writing easier "because you sort it out.... the plan and the rubric help." At the time of the post-intervention interview Nancy stated that a rubric "tells you all the stuff, what you need to do and all the parts." She said it made her writing better because "it helps me get a hook in my head" and made it easier because "if you forget it's right beside you." She indicated that she liked the way it was set out as boxes of "what you can do and what you couldn't do". She also indicated that she would prefer to make the rubric together because "you get different ideas" and that the changes made to the rubric made it easier to "understand and easier to use." Nancy initially stated she couldn't remember what the compare-and-contrast genre was. When encouraged to answer the question she replied that the purpose was to "compare them with the similarities and differences" and that you needed an introduction, a main body, a conclusion, cue words, a hook and punctuation. At the time of the post-intervention interview Ms Smith commented that Nancy could be "very repetitive" in her

writing” but that she was planning more and focusing more. Ms Smith also noted that Nancy had improved in her paragraphing.

Cross Case Trends

Total Number of Genre Elements and Organisational Structure

Across cases, participant use of key compare-and-contrast genre elements increased throughout the study intervention. The following were considered as key genre elements and set out as expectations on the rubric: inclusion of an introduction paragraph; identification of the topic; identification of the genre purpose, inclusion of a hook, a main body organised using either point-by-point or block format, use of cue words, use of direct comparisons or contrasts, inclusion of a conclusion paragraph, a summary of similarities, a summary of differences and inclusion of a personal opinion statement.

The Blind Samples demonstrated a lack of participant understanding of the genre and included almost no key genre elements. In contrast, the writing samples completed by all participants during the Baseline Phase show the use of introduction and conclusion paragraphs and the identification of both the topic being compared and contrasted and the genre purpose. These samples also show participants starting to summarise some of the main body ideas in their conclusions. Figures 4, 5, 8, 11, 14 and 17, above, show an increase in the overall number of genre elements used by each participant throughout the study intervention.

Across-case performance and behavioural observations during the Baseline Phase highlighted the elements requiring more explicit instruction and scaffolding: the hook, the organisational structure and the inclusion of a personal opinion statement. Tables 3, 4 and 5 (p. 61), show where the participants did or did not include these elements during the study intervention phases. The participants were observed to have difficulties formulating conclusions and adding

a personal voice to their writing. They also evidenced difficulties with summarisation skills. The participants struggled to articulate the type of information needed to write an introduction or conclusion or to differentiate between content specific to introductions, conclusions and the main body. Further, they continued to compose without evidence of a clear structural organisation unless prompted by the researcher. At the end of the Baseline Phase all participants continued to demonstrate an absence of unprompted self-planning or independent organisation of provided facts within compare-and-contrast genre criteria. They also continued to demonstrate difficulty producing text in quantity.

Observations during the Delayed Baseline Phase note that participants continued to struggle with the inclusion of a hook and a personal opinion statement in their writing. Field notes document that the participants were familiar with the terms hook and personal opinion but did not demonstrate a clear understanding of how to compose them or how introductions and conclusions related to each other. After a more detailed segmentation into smaller subtasks the participants improved in their use of some elements, the researcher noted that Group B was gaining confidence with the elements of compare-and-contrast writing.

After responsive revision to the rubric and explicit teaching content and delivery (Table 2, p. 44), the writing samples from the Delayed Baseline and Intervention Phases reflect across-case gains in the production of a hook and a personal opinion statement as well as an increased tendency to use a structural organisation consistent with genre expectations (Tables 3-5, p. 61).

A consideration across groups also shows that Group B made similar gains during the Delayed Baseline Phase as Group A did during the first two weeks of their Intervention Phase. Field notes of observation record that when Group B entered the Intervention Phase the participants were more interactive and engaged than Group A, evidencing more understanding of the genre

and self-regulation of the learning objective in their group discussions and responses to feedback. Observations during the Intervention Phase indicated that participants were spending time looking back and forth from the cue word anchor chart to the rubric and other materials. Observations further note that the participants continued to struggle with planning.

Field notes document that when the elements of compare-and-contrast writing were revised according to the rubric-based explicit teaching protocol at the start of each session, many of the participants were able to name and explain the criteria without reference to any instructional materials. By the start of Week Seven, all of the participants were able to orally recite the compare-and-contrast elements without reference to the paper-based rubric and with minimal prompting. Further, most of the participants were able to discuss the purpose and key elements of the compare-and-contrast genre at the time of the post-intervention interviews. The strongest evidence of schema internalisation comes from one participant, Kade, who was able to recount in detail the purpose and specific genre traits emphasised in the instructional rubric at the time of his post-intervention interview. Peter was also able to recite the elements of the compare-and-contrast genre when pressed to participant during the study sessions.

During the Intervention Phase, instances where participants were observed to reference the paper-based rubric were tracked. From the time of introduction of the paper-based rubric into their writing folders, Group A participants referenced the paper-based rubric without prompting from the researcher seventeen times. All but one of these were by one participant; she referenced the paper-based rubric the most times during her Independent Sample. In total, Group B participants referenced the rubric five times without prompting from the researcher. Referrals to the paper-based rubric were observed when participants were starting a new section of their essay or when they were stuck. In general, rubric references were only made subsequent to prompting by the researcher. Even with prompting, participants were not observed to use the

rubric as a revision checklist when they “finished” writing before sessions on that particular topic ended.

Idea Expression

The across-case trend shows a decrease in the number of ideas expressed as discrete facts by each participant (Figures 2, 6, 9, 13, 15 & 18, above). The expression of a higher number of ideas is not shown to correlate with there being a higher number of ideas available in the provided paired texts. Although some of the paired texts offered between twenty and twenty-nine ideas (Appendix N), none of the participants approached the upper limit of ideas made available.

Across cases there was a demonstrated rise in the number of ideas expressed as direct comparisons and contrasts over the course of the study intervention (Figures 2, 6, 9, 13, 15 & 18). The increase in the expression of ideas as direct comparisons or contrasts was particularly high coincident with the high-interest topics of Harry Potter and Lord Voldemort and Spiderman and Superman for all but two participants, Peter in Group A and Nancy in Group B. Observational notes document a difference in the dynamics of Group A and Group B. Group A participants were not engaged with each other and only reluctantly participated in any group discussions and collaborative planning. In particular, Peter avoided interaction with the researcher, his peers and the materials. Within Group B it was Nancy who hesitated to participate in collaborative planning and idea generation.

The data shows a slight dip in the number of similarities and differences expressed in the final three writing samples. However, nearly every idea chosen by the participants for inclusion in the Independent Sample was expressed in terms of the relationship between the two subjects within the topic (Figures 2, 6, 9, 13, 15 & 18). Without exception, the number of ideas

expressed as direct comparisons and contrasts, and thus meeting the learning objective and genre expectation was significantly higher post-intervention than in the Blind Sample.

Cue Word Usage

Across cases all participants demonstrated an increase in the use of cue words to compose comparisons and contrasts (Figures 3, 7, 10, 12, 16 & 19, above). The Blind Samples and observations during the Baseline Phase show that the participants were unfamiliar and unpractised with using cue words as transitions to make comparisons and contrasts. Once explicitly taught how to do this and provided with a visual aide which they could reference while writing, all of the participants began to use the cue words appropriately. As there is no ideal number of cue words to be used, the variations shown across cases or individually are immaterial. Field notes of observation document participant preference for the cue word list to be embedded into the paper-based rubric. This made it easier for them to continue to reference a choice of cue words to use while still utilising the rubric as a guideline or reminder for structural and content decisions. The inclusion of the list in the paper-based rubric as opposed to on a separate tool did not result in any significant change in the number of cue words used.

Chapter Summary

This study explored the use of an instructional rubric to support the teaching and learning cycle for learners with writing difficulties. After an eight-week intervention, participants showed an increase in writing quality demonstrated by meeting the purpose of compare-and-contrast writing through inclusion of specific content and structural genre elements set out in detail in the rubric. The rubric was used as the foundation for explicit instruction and targeted scaffolding and was then provided to participants as an external paper-based reference. The rubric provided a structure for the delivery of explicit and responsive instruction at the level needed to support participants to achieve the learning objective. Further, as an external tool, it

reinforced direct instruction and feedback while promoting the internalisation of genre knowledge and writing strategies. The paper-based rubric also supported participants to self-manage the writing process. The relationship of these findings to the research questions and extant research will be discussed in Chapter Five.

Chapter Five: Discussion

Introduction

This study sought to investigate changes in writing behaviours and outcomes of students with writing difficulties through a study intervention which used a rubric both as a foundation for instructional delivery and feedback, and as an external reference tool available to learners during the composing process. Chapter Four identified the findings for each individual participant and across cases. It explored changes in writing outcomes as evidenced by the measurable impact of rubric usage on the quantifiable number of ideas and genre elements included in writing samples, and changes in behaviours as documented through qualitative observations of participant understanding and development within various aspects of the writing process. This chapter situates those findings within a discussion of how the results answer the research questions and relate to the wider body of extant literature.

Idea Expression

The ability to refer to the paper-based rubric as a material guide while writing did not result in a clear and sustained increase in the number of ideas expressed by any participant in their writing samples. Similarly, the use of explicit rubric-referenced instruction and feedback throughout the study intervention does not appear to have impacted the ability of participants to transfer a higher number of ideas into their written work. Rather, across cases the data suggests that the variability in the number of ideas expressed is related to factors such as time, information density and topic choice.

Participants produced less ideas in their writing samples coincident with interruptions in session continuity or reduced time for writing. Examples are the across-cases lower number of ideas expressed in the New Zealand and Australia writing sample and in the Independent

Samples. The former sample was completed by participants in sessions spread out over two weeks due to unavoidable session cancellations and attendance issues. The latter sample was completed in one session as compared to three or four sessions.

The data also suggests that there may be an upper limit to the number of ideas participants are able to manipulate when composing, at least within the allotted period of time and learning objective of writing within genre expectations. As noted, Adam specifically expressed to the researcher that when there were too many facts within a text it became overwhelming. In recognition of potential confounding influence from factors such as prior knowledge, and decoding and comprehension issues, the study intervention was designed to provide learners with ideas in the form of paired texts containing matched facts useful for making comparisons and contrasts between two things. These texts were read aloud and the participants engaged in collaborative discussion and planning prior to writing. This not only reduced reading demands, but also the need to independently generate ideas (Hebert et al., 2018). The researcher also scaffolded participants through the challenging process of identifying, selecting and organising ideas for inclusion while they were composing (Bazerman, 2009). They were observed to be able to discuss a lot of ideas from the texts and contribute to group planning. Despite these measures, the participants struggled with the ability to simultaneously hold on to and manipulate ideas, word choice and structure in their heads and then successfully retain the results in written form. The cognitive effort required to attend to multiple facets of the writing process at once appears to have limited how many ideas they were able to transfer into their writing outcomes (Chenowith & Hayes, 2003). Thus, although some of the paired texts offered between twenty and twenty-nine ideas, the maximum number of written ideas expressed by any individual participant in any phase of the study intervention was seventeen. This finding is consistent with the SVW, suggesting that it is not the lack of ideas but working memory deficits

which impact the ability of learners to transfer ideas into text (De la Paz, 2007; Graham et al., 2009).

In contrast to the provision of facts, prior knowledge of the topic does appear to have resulted in the expression of a higher number of ideas in writing, particularly where this was coupled with increased interaction during group discussions. Where participants expressed familiarity or interest in a topic, they appeared to organise and use their knowledge in writing more easily during the sessions. The high level of engagement and associated peer-level social scaffolding may have supported the participants' ability to remember, synthesise and use the facts or ideas that had been read or discussed. Although topic choice itself influences idea expression, a comparison of the group dynamics and writing outcomes between Group A and Group B suggests that the collaborative element had a stronger impact than subject-matter familiarity on the ability of participants to remember and utilise their ideas effectively in writing. By way of example, Group B demonstrated strong interactivity throughout the entire study intervention. Within Group B, Nancy was the most hesitant to participate in collaborative planning and idea generation. As a whole, Group A participants were reluctant to engage in discussions, particularly Peter. Consistent with the premise that peer scaffolding contributes to the successful transfer of ideas into writing, Peter and Nancy were two participants who showed a lower number of ideas expressed for the topic of Spiderman/Superman. Nancy both lacked interest and engagement on that topic. Peter, however, was obviously familiar with and interested in the topic but did not produce as many ideas as he did for other topics. Theo is an example of a participant who typically produced less ideas than his peers from Group A or Group B. When writing about Spiderman, however, his high interest and collaborative engagement appear to have impacted his ability to remember and utilise his ideas effectively. As a result, he produced his highest number of ideas on that topic. This supports research

suggesting the value of distributed scaffolding, moving away from the idea that support within the ZPD should come solely from the educator (Dix, 2016).

The conclusion is that, when ideas are defined as the expression of facts, neither the use of instructional rubrics to inform teaching nor as an external material support had the effect of achieving transfer of a higher number of ideas into writing. However, over the course of the study intervention there was a qualitative change in *how* ideas were presented. In the Blind Samples participants engaged in retelling (Scardamalia & Bereiter, 1986a); they were not selecting and synthesising information but were instead copying facts in order. Only one participant, Peter, synthesised the available facts from the paired texts, and even then, only presented one as a direct contrast. In contrast, as the study intervention progressed and the participants developed a greater understanding of the genre purpose and writing expectations, they were observed to be spending more of the session time on activities such as planning, re-reading the text, re-reading their drafts and referencing the rubric. Across cases the data may reflect a downward trend in the overall number of ideas expressed as facts over the course of the study intervention; at the same time, however, there was an upward trend in the number of ideas expressed as direct comparisons and contrasts, a key element of the compare-and-contrast genre (See Figures 2, 6, 9, 13, 15 & 18). For instance, a significant change in how ideas were expressed can be seen in the writing sample Rats, produced during the Intervention Phase and subsequent to implementation of changes to both rubric-referenced instruction and the paper-based rubric. Adam and Rachel in Group A and Theo in Group B show a clear levelling off when the number of ideas expressed as facts is compared to the number ideas expressed as direct comparisons or contrasts (Figures 2, 9, 13). The participants moved from simply reciting facts to organising facts into relationships, a skill which requires more cognitive effort (Perin, 2007). This transition to framing ideas to meet the genre expectation continued for the

remaining writing samples. The use of the instructional rubric as a foundation for consistent and explicit genre element teaching teamed with the provision of available facts may have allowed the participants to move their cognitive effort away from idea generation or the identification of necessary writing steps and towards the “how to say it” (Hammann & Stevens, 2003, p. 733). demands of the genre (Sweller, 2010).

The trend towards an increase in the overall number of direct comparisons and contrasts used dips for the final three writing samples. This is potentially explained by attendance disruptions, reduced time for composition, and variations in topic interest. Nevertheless, the Independent Samples show not only a marked rise in the number of direct comparisons and contrasts made, but, also reflect that nearly every idea chosen for inclusion by each participant was expressed in terms of the relationship between the two subjects within the topic rather than as a discrete fact about one subject or the other. Without exception, the participants demonstrated improvement in the quality of their writing outcomes from their Blind Samples in meeting the genre expectation for idea expression in their Independent Samples (Figures 2, 6, 9, 13, 18).

Meeting Specific Genre Characteristics

This study used a rubric to inform instructional design and delivery, to scaffold explicit teaching, and as a material support to scaffold learners to produce written outcomes which align with the specific features of the compare-and-contrast genre. The information from the pre-intervention interviews and the scoring of the Blind Samples provided a picture of the ZPD for each of the participants (Vygotsky, 1978) and revealed that they did not evidence prior familiarity or knowledge of the compare-and-contrast genre or its key characteristics. The Independent Samples, which demonstrate understanding and use of key genre elements, thus reflect a significant change in writing outcomes. This is supported by observations and

interview responses documenting participant ability to articulate understanding of the compare-and-contrast genre and strategies to meet the learning objective.

As discussed above, the ability to compose direct comparisons and contrasts is one key genre element in which all of the participants demonstrated achievement. Across cases the writing samples also demonstrate measurable improvement in ten other key genre elements. The Blind Samples showed a lack of paragraph use, a failure to identify the writing purpose, a lack of structural organisation and a lack of use of elements particular to the compare-and-contrast genre such as cue words. In sharp contrast, in their Independent Phase samples participants used introduction and conclusion paragraphs, identified the topic and purpose of their writing, used cue words, summarised similarities and differences, and began to consolidate the use of a hook, a personal opinion and an organisational structure suited to the genre. At the time of the post-intervention interviews many of the participants were able to clearly articulate the purpose of compare-and-contrast writing and to recite from memory the elements to be included in order to meet the writing expectations for that genre. Moreover, participants identified the rubric as assisting them to meet the learning objective in instances when they could not remember and were stuck.

The suggestion is that the instructional rubric played a distinct and significant role in scaffolding the researcher to deliver instruction in a way that reduced the level of cognitive effort required, supporting the participants to understand and then internalise the learning objective and how to achieve it (Bharuthram, 2015; Cooper & Gargan, 2009; Moreno & Park, 2010; Sweller, 2010). Moreover, the qualitative data supports the conclusion that when provided as an external scaffold, the paper-based rubric gave additionally-needed support to those participants who continued to struggle to create their own problem-solving schema (Andrade & Boulay, 2003).

The impact of rubric-referenced instruction on changes in writing outcomes and behaviours is seen not only through the overall participant trend to include more elements as the study intervention progressed, but also in the improvements seen proximate to specific informed alterations to the rubric-referenced instructional materials. This is particularly evident when considering some of the genre features observed to pose greater challenges to the participants.

One example is participant use of a defined organisational structure. The progression of such usage is shown in Table 5 (p. 61), reproduced here for ease of reference.

Adam								
Peter								
Rachel								
Intervention Phase / Topic	Blind Sample: Bears	Baseline Phase: Olympics	Baseline Phase: Lemons	Intervention Phase: Harry Potter	Intervention Phase: Spiderman	Intervention Phase: Rats	Intervention Phase: NZ	Independent Sample: Lions
Theo								
Kade								
Nancy								

Table 5: Timeline for Implementation of Block or Point-by-Point Structure

In the Baseline and Delayed Baseline Phases, participants were observed to struggle with a clear understanding of the distinction between two taught structures (point-by-point and block). This was evidenced both by in-session questions and in the writing samples which showed participants using a mix of point-by-point and block elements in their paragraphs. Rather than wait for feedback derived from post-task assessment, tying explicit instruction to the rubric allowed for dynamic reactivity and recursive instructional alterations to ensure that the learning objective and the steps to achieve such were made explicit and were understood by all participants (Allan & Tanner, 2006; Logan & Mountain, 2018; Puntambekar & Hübscher, 2005). Subsequent to changes in the instructional protocol, writing sample evidence of

increased use of the block format, along with participant comments, show a progression in the understanding of how to organise information to meet the learning objective (Schunk, 2012; Vygotsky, 1978; Yilmaz, 2008). One of the participants, Peter, did not utilise a recognisable organisation structure in any of his study intervention writing samples. This can potentially be explained by observations that he resisted feedback and the use of material scaffolds. His teacher confirmed that he preferred just to do things his own way. The other participants, however, greatly improved their use of a structure beginning with the Delayed Baseline / Intervention Phases. When the rubric-referenced instruction acknowledged the need to supplement the Baseline Phase explanation of block and point-by-point structures, and also amended language and format choices on the paper-based rubric, the participants began to incorporate a recognisable structure into their compositions. Then, with repetition and practice, they continued to use such, to include when writing their Independent Sample (Table 5).

Adam								
Peter								
Rachel								
Intervention Phase / Topic	Blind Sample: Bears	Baseline Phase: Olympics	Baseline Phase: Lemons	Intervention Phase: Harry Potter	Intervention Phase: Spiderman	Intervention Phase: Rats	Intervention Phase: NZ	Independent Sample: Lions
Theo				Delayed Baseline Phase: Harry Potter	Delayed Baseline Phase: Spiderman			
Kade								
Nancy								

Table 3: Timeline for Implementation of Use of Hook in Introduction Paragraph

Similarly, the participants were observed to struggle with the creation of a hook in their introduction paragraphs. In the Delayed Baseline Phase and Group A's early Intervention Phase sessions, learner understanding of what a hook is and how to craft such was a focus of instruction. Following this, five of the six participants began to incorporate a hook into their writing (Table 3, p. 61 and reproduced here). The exception to this, Theo, can be potentially

explained by many factors such as the ongoing struggles he evidenced in thinking of ideas, translating his ideas into sentences, ordering his ideas and presenting them in written work within the time allotted.

The real-time educator responsivity followed by a consistency in the use of terms and structures throughout all rubric-referenced instruction, scaffolding and assessment (Biggs, 2003) appears to have served as a shared goal which reinforced the learning objective and supported participants to achieve (Carson & Kavish, 2018; De la Paz, 2009; Dexter & Hughes, 2011; Martin et al., 2018; Martone & Sireci, 2009).

Adam								
Peter								
Rachel								
Intervention Phase / Topic	Blind Sample: Bears	Baseline Phase: Olympics	Baseline Phase: Lemons	Intervention Phase: Harry Potter	Intervention Phase: Spiderman		Intervention Phase: Rats	Independent Sample: Lions
Theo				Delayed Baseline Phase: Harry Potter	Delayed Baseline Phase: Spiderman			
Kade								
Nancy								

Table 4: Timeline for Implementation of Use of Personal Opinion Statement in Conclusion

The use of a personal opinion statement (Table 4, p. 61 and reproduced here) is another element with which the participants struggled. Some of them do appear to have developed an understanding and ability to use such in their writing subsequent to the revisions to rubric-referenced instruction during the Delayed Baseline Phase for Group B and early Intervention Phase for Group A. For example, Rachel, Kade and Nancy used a personal opinion statement in most of their later writing samples. The lack of consistent use of a personal opinion statement can be potentially explained by personal interest in the topic; absent a familiarity or interest some participants might have struggled to choose a personal point of view. Alternately, variable achievements in meeting the genre expectations could be explained by differences in individual writing progression.

Although participant recruitment endeavoured to provide a homogenous sample, the ZPDs and writing development of multiple learners cannot be completely the same (Clay, 1998). Thus, it is not surprising that consistent use or mastery of all genre elements was not achieved during the study intervention. Some variability in writing behaviours and outcomes might be explained by time constraints, participant differences in engagement or ability or the need for even further revisions to rubric-based instruction and scaffolding and extended writing practice. In any case, the data reflects improvement across cases and suggests that more complex elements may be more difficult to internalise and apply in a short time, requiring the distribution of scaffolding through both human and material formats (Dix, 2016). Some participants may have needed the additional external support in order to effectuate a change in writing outcomes.

Thus, in suggesting a functional relationship between instructional rubric use and improved writing outcomes, the impact of both rubric-referenced explicit teaching and the paper-based rubric should be considered. Although prior instruction was tied to the rubric, it was during the Intervention Phase that the rubric was first made individually accessible as an external visual aid. In this paper-format it served as a concrete reminder of the external dialogue introduced through explicit rubric-referenced instruction (Abraham & Lektor, 2013). The same rubric was used as a scoring device; however, unlike in Greenberg (2015), the scoring guidelines were not shared with the participants. This minimises the potential raised by Greenberg (2015) for the learners to simply target the scoring in order to produce an output garnering the highest number of points. Instead, as an external material support the rubric was able to refocus attention (Dix, 2016), regulate the size and difficulty of subtasks to prevent learners from being overwhelmed (Englert et al., 2006; Santangelo & Olinghouse, 2009), and to both clarify and make visible the learning objective and its subtasks (Boon et al., 2018; Li & Lindsay, 2015). Moreover, it allowed for individual support beyond the researcher's ability to provide individualised

guidance and feedback (De la Paz, 2009). This was true during the Intervention Phase sessions; when the researcher might be assisting one participant the others still had access to the paper-based rubric to assist them in going forward.

Significantly, Bradford et al. (2016) found that explicit instruction alone was not sufficient to achieve writing improvements in all areas, but when paired with rubrics there was a definite improvement. Some findings in this study support Bradford's (2016) conclusion that an external rubric can lead to additional progress beyond scaffolding provided by the educator. In particular, for participants who demonstrated more difficulty in writing within the compare-and-contrast genre the availability of the paper-based rubric might have acted as a reminder.

In this study the two participants who frequently referenced the paper-based rubric demonstrated an improvement in their ability to transfer their verbally-expressed understanding of the genre into writing beyond that seen prior to introduction of the paper-based rubric. These were the two participants who struggled the most to achieve during the study intervention and were identified by their literacy teachers as being significantly challenged by writing (Theo and Rachel). Their literacy teachers expressed surprise when viewing the study intervention writing samples, noting improvements such as the amount written and the use of paragraphing and planning. The duplication of the language and structure of the rubric throughout direct instruction, feedback comments and group discussions and then in external materials squares with the suggestion that distributed scaffolding can assist learners to internalise the instructional dialogue and achieve the learning objective (Harris & Graham, 2013; Martin et al., 2018). Further, the availability of the rubric promoted the development of self-regulation processes for these learners (Bradford et al., 2016). Despite continued difficulties with many aspects of writing, both Theo and Rachel were able to demonstrate improvement in both the

quantity and quality of their writing, even if they continued to need the paper-based rubric to do so.

Another example of improvement subsequent to the introduction of the paper-based rubric is the use of a hook by Adam, Peter, Nancy and Kade (Table 3). The hook was identified as a challenging element of compare-and-contrast writing. Despite ongoing rubric-referenced instruction during the study intervention, it was only in their last three writing samples, all composed during the Intervention Phase when they had access to the paper-based rubric while writing, that many of the participants were able to remember to include a hook. Although this might be due to the additional external support offered by the paper-based rubric, alternatively it may be explained by participant response to clarifying revisions to the language and structure of explicit instruction, repeated writing practice or feedback, or even a combination of these conditions.

The potential for the paper-based rubric to have supported the participants is best seen in the Independent Sample results. Despite the lack of any instructional prompting or feedback learners were not completely without guidance; each of the genre tasks was clearly delineated for them and broken down into subtasks on the paper-based rubric. The participants were given the ability to consult the paper-based rubric when they were stuck. They could process task components at their own speed, and self-manage the writing process to use the paper-based rubric as a reminder of what to include, or, use it as a checklist against what they have already written and what they need to do next (Bradford et al., 2016). Field notes of observations were confirmed by participant responses to the post-intervention interviews, identifying that the paper-based rubric was used as a form of instruction, a step-by-step guide and a reminder (Andrade, 2000; Andrade, 2001; Sundeen, 2013). Each of the participants was able to produce an Independent Sample meeting the rubric criteria.

The findings in this study do not suggest that the paper-based rubric can or should take the place of interaction either between instructor and learner or amongst learners at any phase of the teaching and learning cycle. Rather, they support the importance of educators having the continued role and responsibility to establish and guide the learning discourse and goal setting (Eltringham et al., 2018). One strong indication of the role played by the social scaffolding not subsumed by use of or provision of the rubric is the differences noted in engagement of the participants with corresponding performance differences. Similar to Appanah and Hoffman's (2014) finding, positive engagement with instruction, feedback and peer-collaboration appears to have aided some of this study's participants to transfer the learned genre elements and strategies into their compositions. The strongest example of this is Theo's improved performance when writing about high-interest topics.

In fact, the rubric used in this study was integral to the dialectic relationship emphasised as vital to meeting and supporting the learner within the ZPD (Wood et al., 1976; Vygotsky, 1978). It first formed the basis for consistent and clear direct instruction, metacognition, modelling and feedback, which promoted participant construction of their own task schema (Harris & Graham, 2013; Troia & Graham, 2002). Findings show that, even prior to having a material, paper-based rubric to reference during composing, participants rapidly adopted elements taught according to the rubric: paragraph use, inclusion of a purposeful introduction and conclusion, and the conveyance of similarities and differences as direct comparisons and contrasts. Moreover, as documented in observational notes, from Weeks Three and Four the participants were able to verbally name and explain the genre criteria without reference to any instructional materials. This corroborates Andrade's (2001) finding that instructional rubric use can increase learner knowledge of writing criteria.

Although the impact of repeated instruction and practice in the genre may have resulted in a learned effect, the integral nature of the rubric on the explicit instruction as well as qualitative observations that the participants did not reference the paper-based rubric suggest that the explicit rubric-referenced teaching had a strong impact on participant ability to recall and apply rubric elements (Appanah & Hoffman, 2014; Bradford et al., 2016). Using an instructional rubric to inform instruction and feedback fostered participant internalisation of a genre schema.

In this regard the similar gains in genre element use between Group B participants in the Delayed Baseline Phase (prior to provision of the paper-based rubric) and Group A during the first two weeks of their Intervention Phase (coincident with paper-based rubric provision) are potentially important. Writing samples from both of these phases reflect a consistent effort by participants to use introduction and conclusion paragraphs, to identify the topic and purpose, to use cue words, to make direct comparisons and contrasts, and to summarise points in the main body. When looking at one of the three elements that the participants had difficulty with, organising information using the block format, both Group A and Group B showed improvement. However, Group B showed a marked improvement during the Delayed Baseline Phase, prior to provision of the paper-based rubric (Table 5). This suggests that the extended rubric-referenced explicit teaching alone had an impact on participant understanding and ability to organise their written work into a genre-specific format.

For the two writers who struggled the most, Rachel and Theo, however, the paper-based rubric was used as a visual guide to provide additional support during writing. The rubric gave them knowledge of the task and how to achieve it so that they could focus their attention on composing (Schunk, 2012). This was particularly evident in situations where neither peer discussion nor researcher guidance was available. This is consistent with the positive impact the provision of a cue word anchor chart (prior to making the paper-based rubric accessible)

had on all participants. Rather than rely on researcher feedback to appropriately use transition words, the participants were able to reference the chart. This visual reference tool enabled the participants to self-manage their cue word use (Graham & Harris, 2018; Harris & Graham, 2009; Santangelo & Olinghouse, 2009).

For others, however, the overall trend towards using a higher number of genre elements despite a low incidence of spontaneous paper-based rubric referencing suggests that some of the rubric components had been internalised (Appanah & Hoffman, 2014). The strongest evidence of internalisation comes from one participant: Kade, who was able to recount from memory and in detail the purpose and specific genre traits at the time of his post-intervention interview. Other participants were also observed to regulate and manage the composing process without reference to the paper-based rubric. Further, the Year 8 literacy teachers observed an in-class improvement in participant ability to incorporate elements such as paragraphing, making a plan and using a plan in their writing subsequent to the study intervention and without use of a paper-based rubric or continued use of the rubric-based instructional protocol. This further supports the conclusion that the participants internalised some of the writing strategies taught through the use of rubric-referenced explicit instruction.

Chapter Summary

This study found that the use of instructional rubrics throughout the entire teaching and learning cycle led to changes in both writing behaviours and outcomes. The recursive use of the instructional rubric supported more explicit and responsive teaching, feedback and scaffolded writing practise, as evidenced by participants' improved understanding of the genre purpose, its key characteristics and the strategies needed to meet the learning objective. The paper-based rubric promoted better writing by providing participants with an external reminder to guide them in the production of writing that met genre expectations. Moreover, to varying degrees,

each of the participants evidenced an internalisation of the language and structure of the rubric-referenced instruction and then applied their knowledge to transfer their ideation and planning into a written form which met the writing task requirements. The study supports the value of the use of instructional rubrics by educators and learners throughout the teaching and learning cycle to achieve improved writing outcomes.

Chapter Six: Conclusion

Introduction

This study investigated changes in writing behaviours and outcomes when using a purposefully-designed instructional rubric as a scaffold throughout the teaching and learning cycle. It adopted assumptions underlying the SVW, specifically that writing is a problem-solving process (Hayes & Flower, 1980) and that executive functioning deficits affect the attention and memory skills needed to write effectively (Watson et al., 2016). The study intervention was grounded in pedagogical theories emphasising the importance of instructional design which reduces cognitive load, ensures that learning objectives are explicitly taught and scaffolds learners to progress beyond their current developmental capacity (Sweller, 1988; Vygotsky, 1978; Wood et al., 1976). Chapter Two highlighted questions raised by the extant research, particularly the need for further exploration into how instructional rubrics are designed and used by educators and what impact they might specifically have on learners who have difficulty progressing their writing development. This small-scale research in a New Zealand primary school sought to narrowly investigate that issue. Intermediate-school-level research participants who were unlikely to meet the New Zealand End-of-Year-8 National Standards for writing were chosen due to the wide body of research suggesting that these learners require more explicit teaching and both a higher level and longer period of interpersonal and material scaffolding to progress their writing. Within this lens a mixed methodology was used to explore recursive use of an instructional rubric to teach writing. Chapter Four identified the findings for each individual participant and across cases. Chapter Five situated those findings within the context of the research questions and the existing literature. This chapter begins with a summary of the study findings, followed by a discussion

of its limitations and the recommendations for future research. The chapter then identifies some practice implications and closes with the study conclusions.

Summary of Findings

Six Year 8 learners with writing difficulties immediately demonstrated an improved understanding of the purpose of the compare-and-contrast genre and an increase in the use of key genre elements attendant to explicit rubric-based instruction during a Baseline Phase. Revisions were made to rubric-based instruction and materials throughout the study intervention in response to observed writing behaviours, participant feedback and characteristics evidenced in collected writing samples. The number of compare-and-contrast genre elements used by the participants increased after these revisions were made. Similar gains were made across participants despite timing differences in phase implementation, demonstrating that even when the role of the rubric was restricted to guiding explicit teaching, participants benefitted from the more-focused instruction.

A comparison of the Blind Samples to the Independent Samples, as well as to other writing samples obtained throughout the intervention, shows a clear increase in the appropriate use of genre-specific features by each of the six participants. Specifically, in the Independent Samples most of the participants were able to include an introduction which identified the purpose and topic under discussion, to organise facts into direct comparisons and contrasts, to use cue words, to summarise the similarities and differences, and to include a hook and personal opinion statement. The suggestion that the use of an instructional rubric played a role in generally improving writing outcomes is strengthened through participant comments, researcher observations and post-intervention comments by the participants' literacy teachers collected in this study. The data reflects that each participant developed a better knowledge and

understanding of the compare- and-contrast genre and writing strategies useful to meet the learning objective. Even without visual access to the rubric, many of the participants were able to independently discuss key elements of the genre during the study intervention and at the time of the post-intervention interviews. From their perspective, the use of an external, paper-based rubric for reference during composing also made their writing both easier and better. Both during the intervention and in the post-intervention interviews the participants articulated that the rubric helped them to understand what they needed to do and then reminded them how to do it. In the post-intervention interviews, their teachers indicated that the participants' ability to plan and organise their writing improved in the context of classroom writing instruction. And, observational notes documented responsive changes to how the participants approached and engaged with the writing process as well as in participant understanding of the writing purpose and strategies.

Study Limitations

There are multiple factors to which the improvements in writing outcomes shown during this study could be attributed. For example, the individualised and intensive support conditions of this study intervention with a very small group, the varying abilities and personalities of the participants, and, the extended period of practice in the targeted genre could all contribute to observed individual and across case changes in the ability to meet the learning objectives. However, due to the small sample size, the short duration and the administration of all study intervention delivery, data collection and analysis by a single researcher, the potential learned effects from exposure to, and practice in, a new genre cannot be clearly dissociated from the recursive use of explicit rubric-based instruction, or the impact of using an external, paper-based, rubric during composition. This impacts the study's generalisability and outcome attribution.

The first potential limitation stems from the small sample of only six individual case studies. Although the results from any one individual lack statistical power, findings indicative of a replication of results across the six cases in this study supports generalisability (Kazdin, 2011). A comparison of the Blind Samples to the Independent Samples, as well as to other writing samples obtained throughout the study intervention, shows a clear increase in the appropriate use of genre-specific features. Generalisability is further strengthened due to the similarity of findings shown in other research studies which generally show the positive impact of rubric use on writing instruction.

A second potential limitation is the absence of a clearly-defined guidance fading plan to explore the impact of gradual withdrawal of either researcher-delivered rubric guidance or use of the rubric as a paper support. This is an element identified as key to effective scaffolding (Puntambekar & Hübscher, 2005). Nonetheless, the Independent Sample results support the conclusion that at least some of the participants appear to have internalised a schema and were thus able to achieve the learning objective absent rubric-referenced guidance from the researcher. Moreover, observations document that the majority of the participants did not reference the paper-based rubric to complete their Independent Sample. Thus, even absent a fade plan the results suggest that recursive instructional rubric use had an impact on participant ability to internalise newly-acquired knowledge about the compare-and-contrast genre and use it to improve writing outcomes.

The third limitation again arises from the short overall study intervention duration as well as the limited time allotted for each session. The design attempted to both deliver intensive writing instruction and to establish multiple baselines aligning with changes in explicit instruction content and form within the narrow time span of only eight weeks. The continuity of the planned study intervention delivery was also periodically compromised by availability,

absences and cancellations attendant to competing curriculum events. As such, the study's capacity to extend phases to better establish baselines or to impose variations on study conditions so as to establish stronger functional relationships was limited.

For instance, the research design did not afford the time to gather significant pre-intervention data relevant to quantitative writing ability levels or specific skill challenges faced by the individual participants. Instead, the researcher relied on pre-intervention interview responses and the results of the Blind Sample to determine the starting point of each participant. The Blind Sample was thus intended to serve as an individual control for each participant. The lack of further external background information, which could have assisted in more clearly establishing the ZPD of the participants, did not, however, actually act as a limitation. In fact, it strengthens the suggestion that recursive rubric use played a valuable role in informing instruction and scaffolding to respond to individual needs.

Similarly, due to constraints upon phase durations, the study lacks a basis for comparing non-rubric referenced versus rubric-referenced instruction. Also, within the phases themselves, only two data points were collected for each participant; again, due to time constraints, the study intervention progressed through the phases without establishing stable achievement results. Although phase conditions can be used to isolate and explain the learned effect (Kazdin, 2011), the lack of a designed control for the effects of repeated instruction in this study prevents clear attribution of changes in writing outcomes solely to the impact of the instructional rubric. The use of the Delayed Baseline Phase in this study did, however, provide a basis for phasal contrast of the impact of the paper-based rubric, demonstrating improvements in the use of genre elements directly coinciding with explicit rubric-based instruction prior to provision of the paper-based rubric for material reference during composition.

Despite some limitations, this study yielded rich observational session data and targeted post-intervention interview responses from both the participants and teachers. This data identifies the instructional rubric as a strong factor in improving the understanding of both educator and learners in the compare-and-contrast genre and writing strategies needed to produce outcomes meeting the learning objective. When considered with the visible improvements shown in the writing samples, both as individual case studies and as across-case triangulated data trends, the study findings point towards a functional relationship between rubric-referenced explicit instruction and scaffolding and improved writing outcomes.

Recommendations for Future Research

Future research should address the limitations of the current study. For example, future studies should incorporate measures to control for the learned effect, such as to include the collection of multiple blind writing samples to establish a stable level of writing outcomes prior to explicit rubric-referenced teaching of the learning objectives, and similarly, the use of a fade plan to assess independent gains. Moreover, when preparing struggling writers for a writing-to-learn environment, students need the opportunity to respond and learn from feedback and assessment. Future studies should thus consider the duration required to allow for study of the impact of instructional rubric use on the revision and editing stages of the writing process as well as exploration of maintenance and transferability as applied to other curriculum writing tasks. Future research designs should also strive to situate rubric use for struggling writers in the normal whole-class teaching environment. This would allow for a better observation of the interplay between the rubric's impact on explicit teaching and social scaffolding from teachers and peers against rubrics as a paper-based external scaffolding tool.

Significantly, this study's consideration of how rubrics are perceived was limited to researcher observations of changes in writing behaviours and a relatively broad-based assessment by

student participants of whether the specific rubric used in the study intervention helped them. Future research should include a focus on how individuals, both learners and educators, engage with and perceive individual features of rubrics in order to gain a perspective on how instructional rubrics could be of value to the entire teaching and learning cycle. Specifically, a longer study duration with sampling to include multiple educators working with multiple groups of learners is recommended to allow for a more generalisable picture of how instructional rubrics can support the teaching and learning of writing. The use of a larger learner sample and incorporation of the use of effect sizes and regression analysis could strengthen conclusions as to relationships between the use of rubrics and improved writing outcomes. Moreover, a study broadened to include qualitative data from educators could be used to explore how instructional rubric use can effect change in the quality of explicit teaching, feedback and scaffolding throughout the writing instruction process. Future research should examine how rubrics can be used recursively to insist upon a clarity and consistency of language and structure in instructional delivery, feedback and assessment in order to achieve positive changes in writing outcomes.

Implications for Practice in the Classroom

The study findings suggest that current writing instruction at the intermediate-school level could be improved by addressing learner proficiency in the basic building blocks of reading and writing as well as planning skills, and by increasing the use of social scaffolding. First, the six Year Eight participants in this study showed difficulty with skills critical to writing-to-learn such as planning, organising, summarising, selecting information for inclusion, synthesising and framing written expression for an audience at the word and sentence level. The research design contemplated the delivery of explicit instruction at the genre level, specifically the purpose and structure of a compare-and-contrast essay. The researcher was not able to proceed

with whole-genre elements without first providing explicit instruction and guidance at the sentence and paragraph levels. For instance, they required considerable teaching and scaffolding to produce a fit-for-purpose introductory statement, to create a hook, to write a topic sentence and to summarise information. The implication is that, even at the intermediate-school level, writing instruction should continue to assess proficiency in basic literacy skills and explicitly teach to these gaps in order to scaffold learners towards writing to learn.

Second, as observed during the study intervention sessions, the participants were likely to begin writing without planning, or to write only an abbreviated plan and then not reference it while writing. In contrast, they frequently referenced the collaborative group plan while composing. Following explicit instruction in how to plan effectively, to include self-managing the creation of a graphic organiser where one is not provided, and then, how to use the plan effectively, the participants were seen to engage in more pre-writing tasks than before. For some this meant highlighting and colour-coding the paired texts. For others this meant creating a graphic means of gathering necessary information in one place and then using it to decide on the order for writing. The implication is that the planning or pre-writing phase is one not valued or understood by all learners. Although planning may be encouraged by educators, it appears that, at least for learners with writing difficulties, more explicit instruction and practice in strategies to purposefully create, regulate and apply planning would be of benefit in supporting better writing outcomes.

Third, there was a noticeable difference in the level of participant engagement and interactivity between the two groups. Although neither motivation nor peer scaffolding were the focus of this research, the findings of increased idea expression coincident with the topics eliciting the most discussion suggests that instructional design should strive to target learner interests and

to promote peer scaffolding as a means to reinforce explicit teaching and support internalisation of new learning.

Fourth, incidental to the targeted research questions, the findings in this study emphasise how instructional rubric use can promote recursive educator reflection and responsivity which promotes more explicit instruction and more effective scaffolding. The instructional rubric used in this study was designed based on the principles of explicit instruction which are recognised as one way to support struggling writers (Harris & Graham, 2013; Hughes et al., 2003; Troia, 2006). Specifically, the features of the compare-and-contrast genre were segmented into sub-goals at the largest task component size the participants were able to manipulate without causing undue cognitive load (Harris & Graham, 2013; Santangelo & Olinghouse, 2009; Turgut & Kayaoglu, 2015; Appanah & Hoffman, 2014), and the organisation and language used in the rubric-referenced instruction mirrored that used in the paper-based rubric and all other instructional materials. In the Baseline and Delayed Baseline phases, the rubric-referenced instructional protocol served as an heuristic (De La Paz, 2009) and assisted the researcher to more precisely identify the ZPD of the participants and to then tailor the instruction to specifically address individual and across-group understanding of the learning objective and genre elements. For example, when participants demonstrated a lack of understanding of terms used in the rubric (Li & Lindsey, 2015), the researcher substituted agreed-upon terms, contributing to the shared goal deemed essential to educational scaffolding (Puntambekar & Hübscher, 2005). The integration of the cue word list into the rubric minimised attention splitting (Sweller, 1988; Sweller, 2010). The observation that participants had difficulty with segmenting the parts of the introduction or conclusion led to the separation of the rubric into three corresponding parts, as well as the detailed segmenting of these parts into smaller subtasks (Hyland, 2008). And, most notably, observations as to a lack of shared

understanding of what was meant by a hook or a personal opinion or an expression of similarities and differences as a direct comparison or contrast led to revised instruction, further strategies and more targeted practice and feedback on these elements (Li & Lindsey, 2015). Similarly, observations as to participant difficulty planning, selecting and organising information, and using paragraphs to promote the writing purpose led to a revised instructional approach and more detailed scaffolding on the rubric (Allen & Tanner, 2006). Each observation of a lack of progress against the rubric elements led to revised instruction, further strategies and more targeted practice and feedback (Andrade, 2000; De La Paz, 2009). Thus, in addition to informing instructional design for the researcher and acting as an external reminder for the participants, both the quantitative and qualitative findings suggest that recursive use of instructional rubrics improved the consistency and quality of explicit instruction and helped the participants develop internal genre schemata. The practice implication is that the definition of rubric should be extended; it is not a piece of paper, but is instead a guide for explicit and responsive teaching, modelling, discussion, collaborative planning, feedback and supported writing practise.

Conclusions

Instructional rubrics should be embraced as a tool which scaffolds both educators and learners. This study adds to the body of evidence showing that instructional rubrics can clarify learning objectives and task elements and guide learners through the writing process. The practice of constructing an instructional rubric buttressed extant research suggesting that rubrics can serve as a check on educator understanding and can ensure learners receive informed and intentional instruction. The ongoing use of an instructional rubric as the foundation for instructional delivery identified shortcomings in both instruction and support materials as well as highlighting participant misunderstandings and weaknesses. The use in a paper-based form

supported learners who continued to need more intense instruction and scaffolding. The use of an instructional rubric, when understood as a support used by both the educator (researcher) and learners recursively and responsively, aligns with the constructivist assumption that knowledge is not doled out by the teacher, but is instead constructed by and with the learner (Ertmer & Newby, 2013; Vygotsky, 1978). The larger implication is that rubrics should undergo a definitional swing from assessment and fixed-point use to instructional and recursive use. Tying all aspects of writing instruction to a rubric can foster more informed, intentional and responsive teaching. The use of an instructional rubric as a learning framework supports the transparency, clarity and manageability of learning objectives for learners. To address the continued underachievement in writing, instructional rubrics have the potential to bridge gaps in the teaching and learning cycle and support both educators and learners to achieve better writing outcomes.

Appendices

- A. Research Phase Timeline
- B. Ethics Application and Checklists
- C. Principal/School Information Letter
- D. Information Sheet for Tamariki / Students
- E. Teacher Information Letter
- F. Parent / Whānau / Aiga / Caregiver Information Letter
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- K. Student Participant Pre-Intervention Interview Protocol
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- O. Initial Instructional Rubric
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Appendix A: Research Phase Timeline

		Group A: Adam Peter Rachel	
	Blind Sample: Bears	Blind Sample: Bears	
	Baseline Phase: Apples	Baseline Phase: Apples	
	Baseline Phase: Olympics	Baseline Phase: Olympics	
Session	1 2 3 4	5 6 7 8	9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
Week	Week 1	Week 2	Week 3
	Delayed Baseline Phase: Harry Potter	Intervention Phase: Cars	Intervention Phase: Harry Potter
	Delayed Baseline Phase: Spiderman	Intervention Phase: Cars	Intervention Phase: Spiderman
			Intervention Phase: Rats
			Intervention Phase: NZ
			Independent Sample: Lions

Appendix B: Ethics Application and Checklists

Application Form for Ethical Approval of Research Projects

Educational Research Human Ethics Committee (ERHEC)

- **All** research activities undertaken by staff and higher degree students at the University of Canterbury must obtain Ethical Approval unless they meet the criteria for an exemption as listed under the Human Ethics Policy. Before making an application to the ERHEC, all researchers should read the Human Ethics Policy found on their current web site: <http://www.canterbury.ac.nz/study/ethics/educational-research-human-ethics-committee/>
- The Principal Researcher must be a UC staff member or student. For collaborative projects, the principal researcher is responsible for all aspects of project management, including applying for ethical approval and re-applying should circumstances relevant to this application change. All correspondence will be undertaken with the principal researcher.
- Applications to the ERHEC must be received by the Secretary **at least ONE week prior to a meeting** in order to be considered at that meeting.
- **Please submit one electronic copy and one hard copy (written) application to the Secretary**

The Secretary, UC Educational Research Human Ethics Committee, Level 5 South, Matariki or Private Bag 4800, Christchurch 8140
Phone: (03) 369 4588, Extension 94588;
Email: human-ethics@canterbury.ac.nz

Project Details

Principal Researcher:	Jeanne Pearce
Email Address &	jeanne.pearce@pg.canterbury.ac.nz
Postal Address	[REDACTED]
Phone	[REDACTED]
University School / Department:	University of Canterbury, School of Health, Education and Human Development / School of Teacher Education

Associate Researcher/s:	None
Name of supervisors: (where applicable)	Dr. Alison Arrow alison.arrow@canterbury.ac.nz Dr Tracey Millin tracey.millin@canterbury.ac.nz
Project Title:	The Use of Instructional Rubrics to Support Learners with Writing Difficulties: A Mixed Methods Approach
<p>Checklist</p> <p>Please check the following items before sending the completed form to the Committee.</p> <p>All the necessary signatures on page 1 have been obtained. Yes</p> <p>All the necessary approvals under Question 4 have been obtained or are the subject of correspondence of which copies are attached. Yes</p> <p>A copy of any questionnaire accompanied by an appropriate covering page is attached. Yes</p> <p>A list of interview topics and, for a structured interview, a detailed list of questions, is attached. Yes</p> <p>A copy of any advertisement, or notice, or informative letter asking for volunteers is attached. N/A</p> <p>A copy of each information sheet required is attached. Yes</p> <p>A copy of each consent form required is attached. Yes</p>	
<p><i>Attention to the preceding checklist is intended to ensure that the application and its documentation have been thoroughly reviewed by the applicant and, where applicable, by the supervisor and that the preparation of the project is up to the standard expected of and by the University of Canterbury.</i></p>	

The signature of the applicant will be understood to imply that the applicant has designed the project and prepared the application with due regard to the Principles & Guidelines of the ERHEC, that all the questions in the application form have been duly answered and that the necessary documentation has been properly formulated and checked.

Signature of Applicant _____ Jeanne M. Pearce _____ Date: February 2019

Jeanne M. Pearce

The signature of the supervisor will be understood to imply in addition that, in the judgment of the supervisor, the design and documentation are of a standard appropriate for a research project carried out in the name of the University of Canterbury or for training in such research.

Signature of Supervisor _____ Date: February 2019

Alison Arrow

Please note, applicant and supervisor signatures are also required on page 8.

1. What is the purpose of your research project?
(Please tick one box only)

- Staff Research
- PhD Research
- Honours or Master's Research

2. Description of the project

Please give a brief summary of the nature of the proposal in everyday language, including the aims/objectives/hypotheses of the project, rationale, participant description, and procedures/methods of the project including time requirements for the participants.

Rationale

Learners with writing difficulties experience more obstacles to achievement than their peers and the need for additional writing support persists at the intermediate school level. However, it is difficult for educators to provide such support in the face of the post-primary school shift from dedicated writing instruction to writing across the curriculum, and due to time and resource constraints. Adapting rubrics, already widely used for assessment purposes, into external instructional scaffolds could operate to free the cognitive effort required of learners with writing difficulties and allow them to concentrate on one step of the writing process at a time. Moreover, using one tool which aligns instruction with assessment would provide students with a consistent, clear and explicit set of writing expectations and foster independent learning.

Objectives

The purpose of this research is to investigate changes in writing behaviours of learners with writing difficulties when using an instructional rubric as a scaffolding device for writing. The research questions to be explored are:

1. What effect will the use of instructional rubrics have on the ability of learners with writing difficulties to transfer ideas into written outcomes?
2. What effect will the use of instructional rubrics have on the ability of learners with writing difficulties to meet the purpose of the writing task by attending to specific genre elements?
3. How will learners use the instructional rubric during the writing process?
4. How do learners and teachers perceive the use of instructional rubrics in terms of efficacy?

Participant Description

Student participants will be randomly selected from a pool of potential candidates chosen by the participating school based the following eligibility characteristics:

- Year 8 (age 11-13)
- Enrolled in mainstream, English-medium school
- Assessed as writing at or below Level 3P by school staff*
- Not eligible for English for Speakers of Other Languages support*
- No identified behavioural problems*

- Not currently in receipt of in-school writing support*

*The researcher will not have access to student records; eligibility determinations will be made by the School Principal and Year 8 teachers. The intent is to approach the Principal and through him liaise with Year 8 teachers who have knowledge of the needs of learners in their classrooms to identify suitable candidates for participation in the study. The Principal may involve other staff as he deems appropriate and necessary to the task of identifying a pool of sample participants. The exclusionary criteria are intended to mitigate against confounding factors that may impact the effects of the study intervention.

The Year 8 teachers normally involved in the literacy instruction of the selected student participants will also be asked to participate in a post-intervention interview. The study is not bounded by obtaining teacher participation in these interviews. The study primarily seeks to recruit students with writing difficulties to take part in an intervention. If a classroom teacher declines participation there will be no impact on student consent or participation.

Methods

The student participants will take part in an intervention, “Focus”, which will consist of a twenty-minute writing session four times per week for 8 weeks of Term 23, 2019. Participants will be randomly divided into two groups. This will be a comparative delayed intervention with multiple baseline design. The Baseline Phase sessions will follow the general format of a mini writing lesson on the compare and contrast genre, group discussion of the provided writing prompt and independent writing. In the Intervention phase participants will receive explicit instruction on how to use rubrics during the writing process. The Baseline phase will be used to establish writing achievement in the compare-and-contrast genre prior to introduction of the rubric. Group A will be administered the Intervention first. After further Baseline Phase instruction, Group B will be administered the same intervention on a delayed basis. During the Intervention Phase each group will produce writing samples using the Rubric to produce compare-and-contrast essays in response to paired text prompts. (Appendices A, N, O).

- Semi-structured pre- and post-intervention student participant interviews (Appendices K, L)
- Field notes of observations during all intervention sessions
- Recordings of initial eight Baseline sessions and initial 4 Intervention sessions as well as every second session of other weekly sessions
*This is for reliability purposes, to support field notes of observations
- Pre-, periodic and post-intervention writing samples, rubric sheets and planning/draft notes

Collected essays (writing samples) will be scored according to the Rubric and then analysed to track changes in the number of ideas transferred from planning to written output, and, the number of genre-specific elements included in the compare and contrast essays over the duration of the study. Other collected written work will include the rubric sheets and any planning and draft notes produced by the students during the intervention. Collected student participant data will also be analysed to identify changes in writing behaviours, how students used the rubrics while writing, and obtain information about their knowledge and attitudes towards writing, the compare-and-contrast genre and rubrics, both prior and subsequent to the intervention.

- Semi-structured post-intervention teacher interviews (Appendix M)

The results of the post-intervention teacher interviews will be used to identify whether teachers observed any changes in writing behaviours or achievement in the student participants. The purpose of the Post-Intervention Semi-Structured Teacher Interview is to identify and explore changes in participant writing from a different perspective.

The researcher will be solely responsible for administering the Baseline and Intervention sessions and for all data collection, with the exception of the initial assessment of writing achievement used to establish eligibility, which will be done by school staff, previously defined as Year 8 teachers and the Principal.

3. Which of the following categories best describe your research project?
(Please tick one box only)

- Educational or social science research involving humans
 Psychological research involving humans
 Scientific research involving humans
 Other (Please specify)

4. (a) Will the project require approval for access to the participants from other individuals or bodies? (e.g., parents, guardians, school principals, teachers, boards, responsible authorities including employers, etc.) Yes/No

If Yes, please explain how this approval has been or will be obtained, enclosing copies of relevant correspondence.

- **Information Letter and Consent Form from School Principal**
- **Information Letter and Consent Form from Teacher(s)**
- **Information Letter and Consent Form from parents, whānau, aiga or caregivers**
- **Information Letter and Assent Form from students**
- **[Appendices C-J]**

(b) Will the project require Māori consultation? Yes/No

If Yes, please provide evidence that consultation has occurred or, if underway, provide a copy of approval once gained.

(c) Will the project require community consultation? Yes/No

If Yes, please provide evidence of appropriate consultation.

(d) Is the project commissioned by or carried out on behalf of an external body? Yes/No

If Yes, please identify the body and any Intellectual Property agreements. This includes ownership of data and reports arising.

(d) Will all or any part of the data be collected from outside New Zealand? Yes/No

If Yes, please provide details.

5. What methods will be employed in conducting your research?
(Please tick more than one box if needed)

- Examination of normal educational practice or education instructional strategies, instructional techniques, curricula, or classroom management methods, journal, existing data, documents etc.
- Questionnaires or surveys
- Examination of medical, educational, personnel or other confidential records
- Observation (covert)
- Observation (overt)
- Video Recording (at any time) ***Audio**
- Structured interviews
- Semi-structured interviews
- Unstructured interviews
- Focus group interviews
- Deception – Explain why and how deception is used and provide a debriefing sheet
- Other (please specify below, stating any significant aspects)
 - **Field notes of observations**
 - **Writing Samples, rubric sheets and planning/draft notes**

(a) Does the project involve a questionnaire? Yes/No
If Yes, please attach a copy.

Note: The ERHEC does not normally approve a project which involves a questionnaire without seeing the questionnaire, although it may preview applications in some cases where the production of the questionnaire is delayed for good reason.

(b) Does the project involve a structured interview? Yes/No

If Yes, please list the topics to be covered and the questions to be used.

(c) Does the project involve a semi-structured interview, unstructured interview or focus group? Yes/No
If Yes, please list the range of topics likely to be discussed.

The purposes of the pre-intervention semi-structured student interviews are to explore prior familiarity with the compare and contrast text type, familiarity with rubrics and familiarity with paper-based scaffolding in the classroom. Also, the pre-intervention semi-structured student interviews are a means to identify and explore existing writing attitudes and behaviours.

Pre-Intervention Semi-Structured Interview with Student Participants (Appendix K)

- ***Familiarity with the compare and contrast genre***
- ***Familiarity with the use of rubrics***
- ***Familiarity with the use of paper-based writing support tools***
- ***Attitudes towards writing***

The post-intervention semi-structured student interviews are intended to add to the understanding of how the intervention may have impacted student writing behaviours or outcomes. When the responses are considered in tandem with the pre-intervention responses, data from writing samples, data from rubric sheets/draft and planning notes, teacher feedback through the post-intervention teacher interview, and researcher observations during the intervention sessions, themes and patterns may emerge to provide corroboration, shed light on potential limitations, or to explain mediatory effects.

Post-Intervention Semi-Structured Interview with Student Participants (Appendix L)

- ***Knowledge of compare and contrast genre***
- ***Knowledge of rubrics***
- ***Attitudes towards writing***
- ***Attitudes towards rubrics***

The purpose of the post-intervention semi-structured teacher interview is to identify and explore changes in participant writing behaviours and outcomes from a different perspective.

Post-Intervention Semi-Structured Interview with Teachers (Appendix M)

- ***Observed changes in writing behaviours of Student Participants***
- ***Observed changes in quality of writing outcomes of Student Participants***

(d) If the project involves an interview of either type (individual or focus group), will it be recorded by **audio-recording** **Yes/No**

visual recording **Yes/No**

note taking **Yes/No**

or other (*if Yes, please specify below*) **Yes/No**

(e) Will the participants be offered the opportunity to check the transcript of the interview? **Yes/No**
This also applies to focus groups.

Note: it is normal practice to have participants review their transcription. If this is not to be the case,

please explain why you believe it is not necessary.

Participants should be informed of interview recording and transcription review within the information letter.

- In the Information Letter Teachers will be informed of the recording of the post-intervention semi-structured interview and offered the opportunity to review the transcription of such for accuracy. [Appendix E].
- In the Information Letters the participating school Principal and all parents/whanau/aiga/caregivers will be informed that some of the intervention sessions as well as the pre- and post-intervention semi-structured interviews will be recorded. They will be advised that students will be afforded opportunity to review the transcript and ask questions or make comments. [Appendices C, F]
- Student participants will be offered the opportunity to review the transcription of the semi-structured interviews with the researcher and ask any questions or make comments. The Information sheet provides the option for the student to read through the transcript or to have it read to them by the researcher. [Appendix D]

6. (a) What are the ages of your participants?

Children (under 14 years of age)

Year 8 students will be asked to participate in an 8-week writing instruction intervention as well as pre- and post-intervention semi-structured interviews.

Young people (14-17 years of age)

Adults (18 years and over including College/University students

***Teachers will be asked to identify potential learners for inclusion in the study, and to participate in a post-intervention semi-structured interview. The study is not bounded by obtaining teacher participation in these interviews. The study primarily seeks to recruit students with writing difficulties to take part in an intervention. If a classroom teacher declines participation there will be no impact on student consent or participation.**

- (b) How are they to be recruited? If a selection from a group is necessary, how will it be made (e.g., randomly, by age, gender, ethnic origin, other)?

The participating school (Principal in consultation with Year 8 teachers) will be asked to identify a pool of students who meet the following criteria:

- Year 8 (age 11-13)
- Enrolled in mainstream, English-medium school
- Assessed as writing at or below Level 3P by participating school
- Not identified as eligible for English for Speakers of Other Languages support
- No identified behavioural problems
- Not currently in receipt of in-school special needs support

How many participants (of each category, where relevant) do you intend recruiting?

The researcher will randomly select six participants from the sample pool; these will be randomly split into two groups. If consent is not obtained from those randomly selected, recruitment through school channels will continue until enough students have been recruited. The classroom teacher(s) of the 6 participants will be asked to complete the post-intervention teacher interview.

7. (a) Anonymity of participants and confidentiality of data

Please tick YES or NO for each

YES NO

 Will complete anonymity of participants be guaranteed?

- Will records remain confidential and access to data be restricted?

NOTE: See 8(a) and (b) for an explanation of anonymity and confidentiality.

(b) Voluntary participation and complaints procedure

Please tick YES or NO for each

YES NO

- Are participants able to withdraw from the project at any time without penalty?
- Have participants been made fully aware of the ERHEC's complaints procedure should they have any concerns regarding the researcher or the project?

Anonymity is not part of this research. Students will be known to the researcher and names will be recorded on raw data protocols for ease of use during data collection. Following this, data will be made confidential by the removal of names from the raw data. The data will be anonymised so that only pseudonyms will be used in the reporting of findings and conclusions. Access to the raw data will be restricted to the researcher and supervisory university staff. After a period of five years all data will be destroyed.

If you answered no to any of question 7 above, please provide additional information below explaining why these procedures are not being followed and how potential risks to participants will be minimised.

8. How is informed consent to be obtained? Please tick one.

- (a)** The research is strictly anonymous; an information sheet is supplied and informed consent is implied by voluntary participation in filling out a questionnaire (include a copy of the rubric for the questionnaire as in Appendix C of the ERHEC Principles and Guidelines)

This means you do not know the identity of any of the participants and will not include any personal participant details.

- or **(b)** The research is not anonymous, but is confidential and informed consent will be obtained through a signed consent form (include a copy of the consent form and information sheet). *This means that while you do/may know the identity of the participants, with respect to the data provided, you will not make their identity public (e.g.in any presentations or publications).* Where confidentiality is promised, what will be done to

ensure that the identities of participants cannot be known by unauthorized persons? (e.g. use of pseudonyms and disguising of identifying material).

- **Information letters and consent forms will provide notice of what participation will involve, to include purpose of the study, participation time commitment, forms of data collection, recording of sessions, status of a thesis as a public document, confidentiality, use of pseudonyms in reporting, secure data storage measures, potential risks and how they will be addressed and rights of withdrawal.**
- **Anonymity is not part of this research. Students will be known to the researcher and names will be recorded on raw data protocols for ease of use during data collection. Following this, data will be made confidential by the removal of names from the raw data. The data will be anonymised so that only pseudonyms will be used in the reporting of findings and conclusions. Access to the raw data will be restricted to the researcher and supervisory university staff. After a period of five years all data will be destroyed.**

- **[Appendices C through J]**

or (c) The research is neither anonymous nor confidential and informed consent will be obtained through a signed consent form (include a copy of the consent form and information sheet).

or (d) **Do you need an additional consent for any of your participants?**

NOTE: Children and young adults under the age of 14 years (or 18 years if still at school) require parental/caregiver consent. Such participants should be provided with a suitable information sheet and an assent form where practicable.

If yes, please explain:

- (a) Why they are not competent to give informed consent on their own behalf.
- (b) How consent will be obtained Student participants are under the age of 14.

- **Parents/whanau/aiga/caregivers will be provided with an information form and requested to return a consent form allowing their under-18-years-of age-child to participate in the study. [Appendices F, I]**
- **Students will be provided with their own information sheet and requested to return an assent form for their own participation. [Appendices D, J]**

NOTE: Forms need to be provided to children to give own consent and parents 'consent also needs to be obtained.

or (e) Informed consent will be obtained by some other method - please specify and provide details e.g. support people, whanau etc.

(f) If information is being supplied orally, please provide a full description of the information Provided.

9. Are there any foreseeable risks or possible offence to the participants?

Please tick YES or NO for each

YES NO

Social risks

Students are being withdrawn from class to participate in intervention sessions. Small group withdrawal is common and this will take place during class time and on school premises, in consultation with school staff. Efforts will be made to find a withdrawal time limiting the potential for students to miss out on other social or learning opportunities. The duration of intervention sessions is also limited to 20 minutes to limit any time out of class. The time for the intervention will be decided in consultation with the Principal and Year 8 teachers with the intent that the intervention will take place during normal writing instruction. Participants and their caregivers have been advised of the right to withdraw at any time or to ask questions should they become uncomfortable.

Students will be interviewed in a one-on-one withdrawal situation. The interview duration will be limited to 10 minutes to mitigate time lost from other classroom activities.

Legal risks

Psychological risks

Students may feel sessions are too hard. They will be given the ability to take breaks if needed.
Should students or their parents become uncomfortable they have the right to stop participating at any time.

Students may feel stressed, embarrassed or uncomfortable during the interview or sessions.
They have the right to take breaks or to withdraw at any time. They will also have been advised to talk with parents/whanau/aiga/caregivers or their teachers if at any time they feel uncomfortable or have questions about the study. Students will be provided with a transcript of each interview and given the opportunity to ask questions and respond. The confidentiality of the interview responses is assured. Following student review of the transcription the audio recording of the interview will be destroyed and the transcript will be anonymised by means of a pseudonym.

Physical risks

The school will be asked to ensure recruited participants are not a behavioural risk.

Religious or moral offence

Cultural risks

Any other risks

The interviews and intervention sessions will be conducted face-to-face by the researcher without the presence of a teacher or parent. The researcher will have successfully completed safety checks done in compliance with the Vulnerable Child Act prior to the start of the study or any interaction with the student participants.

With respect to the safety of the researcher and the participants during the sessions, the recruitment scheme excluded students with known behavioural risks from participation. Moreover, the intervention will take place in a location that is close to the classroom or near to a leadership member. This researcher also has classroom experience in behaviour management.

If you answered Yes to any of the above, please provide additional information below explaining the nature of the risk or offence, how it will be minimised and access to support services.

10. Data Storage and Future Use

How will this be stored?

- (a)** Provide details of where the data with identifying information will be securely stored.

During the study paper-based materials will be stored securely in a locked cabinet, accessible only by the researcher. Thereafter, documents will be scanned and stored electronically on a password-protected server and raw data will be destroyed. The supervisor will be responsible for the storage and destruction of the electronic data. Data will be stored on the supervisor's password protected drive on the University of Canterbury's servers. After five years it will be destroyed.

- (b)** Provide details of where the data with no identifying information will be securely stored.

The researcher will maintain records in a secure, locked location for the duration of the research project and then convert such to electronic format to be stored on a password-protected server. Upon electronic transfer raw data will be destroyed. The supervisor will be responsible for the storage and destruction of the electronic data. Data will be stored on the supervisor's password protected drive on the University of Canterbury's servers. After five years it will be destroyed.

- (c)** Who, apart from the researcher and their supervisor (where applicable) will have authorised access to the data? Note: Research Assistants and Transcribers need their own confidentiality forms and their participation needs to be made known to participants.

No one apart from the researcher and supervisors will have access to the data.

- (d)** What will be done to ensure that unauthorised persons do not have access to the data?

Electronic storage will be password protected. Non-electronic materials will be housed in a secure, locked location inaccessible other than to the researcher.

- (e)** What will happen to the raw data at the end of the project? Note: Up to Masters level data is kept for 5 years and then destroyed; for above Masters and staff research, it is normal practice to keep for 10 years and then destroyed. Participants need to be informed of and consent to what is decided.

The supervisor will be responsible for the storage and destruction of the electronic data. Data will be stored on the supervisor's password protected drive on the University of Canterbury's servers. After five years it will be destroyed.

. (a) What plans do you have for publication of the data?

- Master's theses are public documents via the University of Canterbury Library database.

(b) Participant access to research summary

Have you offered to provide a summary? (rather than participants needing to request) Yes/No

Schools and Parents/Whānau/Aiga/Caregivers will be offered an anonymised summary of the results.

Have you provided opportunity for participants to provide an email address for future contact?

- Form includes space for email contact address.

Yes/No

12. Are there any other ethical issues that should be drawn to the attention of the Educational Research Human Ethics Committee?

NO

YES

If you answered Yes, please provide additional information below explaining the ethical issue(s) and how it will be addressed.

13. Participant information sheet

Please attach a copy of the information sheet that you will provide to participants in your study.

The Educational Research Human Ethics Committee has strict but simple requirements for participant information sheets.

See Appendices C, D, E, F

14. Consent Form

Please attach a copy of the consent form(s) that participants in your study will sign.

The Educational Research Human Ethics Committee has strict but simple requirements for consent forms. These guidelines must be followed or your application will not be considered.

See Appendices G, H, I, J

15. Declaration

I AM APPLYING FOR **ETHICAL APPROVAL** FOR THE RESEARCH PROJECT AS OUTLINED ABOVE.

I have read the ERHEC Principles and Guidelines and I am aware of the implications of my research project. I understand the details of the Privacy Act mentioned in these guidelines and how they influence the subjects I choose as participants in my research work.

The project has been accurately described in this application and I have included all the necessary documents and information to support my application.

I undertake to reapply should circumstances relevant to this application change.

Principal Researcher's Name Jeanne Marie Pearce

Signed: Jeanne M. Pearce

For Academic Supervisor - student projects only

Please note that applications for ethical approval **are not usually considered** if the student has not submitted their research proposal for registration.

Please check all that apply:

The student has submitted their research proposal for consideration. **Date submitted:**

OR

The student has successfully registered their research proposal. **Date registered:**

I have read the student's application for ethical approval including the information and consent forms.

I undertake to work with the student on any revisions required by ERHEC before these revisions are sent back to ERHEC.

Academic	Supervisor's	Date
Name	Alison Arrow	:

Signed:

NB – THIS DECLARATION MUST BE HAND-SIGNED



University of Canterbury

Educational Research Human Ethics Committee

Applicant Checklist [Please include with application, do not delete]

SECTION	1	APPLICATION	FORM
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Researcher's name, role and purpose given	Yes
If applicant is a student, has their proposal been submitted?	Yes
Description of the project includes: - Aims - Rationale - Description of participants including sampling strategy - Procedures and methods	Yes
Description of the project matches what is in the information sheets	Yes
Anonymity assured or explanation	Yes

Confidentiality of raw data assured	Yes
Voluntary participation	Yes
Right to withdraw assured or explained	Yes
Complaints procedure	Yes
Risks identified and covered	Yes
Any other ethical issues	No
Other	None

SECTION 2 INFORMATION FORM(S)/LETTER(S)

CRITERIA	Letter to:	School	Teacher	Parent	Student
Researcher's name, role and purpose given	Yes	Yes	Yes	Yes	Yes
Title of project	Yes	Yes	Yes	Yes	Yes
Brief description of aim of project	Yes	Yes	Yes	Yes	Yes
Requirements for participants clearly spelt out. - How much time - The nature of the involvement - Any special meeting requirements - Etc	Yes	Yes	Yes	Yes	Yes
Voluntary participation	Yes	Yes	Yes	Yes	Yes
Right to withdraw assured or explained	Yes	Yes	Yes	Yes	Yes
Steps taken to ensure confidentiality are explained	Yes	Yes	Yes	Yes	Yes
Secure storage of raw data and data destruction assured	Yes	Yes	Yes	Yes	Yes
Anonymity assured or explanation of why this isn't guaranteed	Yes	Yes	Yes	Yes	Yes
Information about use for publication, etc	Yes	Yes	Yes	Yes	Yes

Any risks described including their remedies including conflicts of interest	Yes	Yes	Yes	Yes
Summary of results available to participants	Yes	No	Yes	No
Contact details for researcher (and supervisor if necessary)	Yes	Yes	Yes	Yes
In the body of the information form, complaints procedure as follows: Complaints may be addressed to The Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch, Email: human-ethics@canterbury.ac.nz	Yes	Yes	Yes	No
Consent procedure outlined	Yes	Yes	Yes	Yes
Forms on UC Letterhead (available on ERHEC website)	Yes	Yes	Yes	Yes
Information to participants in style appropriate to age, etc.	Yes	Yes	Yes	Yes
Other – e.g. compensation for participation, subsequent tasks or procedures	N/A	N/A	N/A	N/A

SECTION 3 CONSENT FORMS

CRITERIA	Form for:	School	Teacher	Parent	Student
Title of project	Yes	Yes	Yes	Yes	Yes
Statement included that notes full explanation of project has been given on information sheet and understood	Yes	Yes	Yes	Yes	Yes
Statement included that participation is voluntary	Yes	Yes	Yes	Yes	Yes
Statement included that participants understand that they have the right to withdraw at any time	Yes	Yes	Yes	Yes	Yes
Agrees to publication of results with understanding that anonymity will be preserved where this has been a condition of participation	Yes	Yes	Yes	Yes	Yes
Summary of results available to participants	Yes	No	Yes	Yes	No
Forms on UC Letterhead (available on ERHEC website)	Yes	Yes	Yes	Yes	Yes
Information to participants in style appropriate to age, etc.	Yes	Yes	Yes	Yes	Yes
Place for participants to sign, if applicable	Yes	Yes	Yes	Yes	Yes
Information given for return of consent form to researcher	Yes	Yes	Yes	Yes	Yes

Other – e.g. covers any special provision such as waiver of confidentiality, publicly available storage of research material, or use of video and photographs	Yes	Yes	Yes	Yes
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Appendix C: Principal/School Information Letter

Principal/School Information Letter

Jeanne M. Pearce, Graduate Student, School of Teacher Education
jeanne.pearce@pg.canterbury.ac.nz

20 May 2019

ERHEC Ref: 2019/12/ERHEC Application - Pearce

Title of Research Project: The Use of Instructional Rubrics to Support Learners with Writing Difficulties: A Mixed Methods Approach

My name is Jeanne Pearce. I am currently working towards a Master of Education at the University of Canterbury. I am focusing on ways to support learners with writing difficulties in the mainstream classroom. The purpose of this research is to investigate the use of an instructional rubric by intermediate-school learners with writing difficulties during the draft phase of the writing process. During an eight-week intervention, participants will be taught how to use a rubric to help them meet the purpose and goals associated with the compare-and-contrast writing genre. The study will also explore student writing attitudes and behaviours.

Your school has been approached to take part in this study because of the focus on Year 8 students enrolled in a mainstream, English-medium school. I am looking for learners with writing difficulties.

The research will be conducted during Term 3 (22 July - 27 September). The study will consist of:

- A Post-Intervention Semi-Structured Teacher Interview. This will be of 10 minutes duration and take place at a time and location convenient for each participating teacher within the period from 9 - 27 September.
- Pre-and Post-Intervention Semi-Structured Interviews with student participants. These will each be of 15 - 20 minutes duration and take place at the location designated for the Intervention sessions. The first interviews will take place during Week 1 or the start of Week 2 of term 3. The second interview will take place within the period from 9 - 27 September.
- An Intervention with students. The Intervention will consist of four twenty-minute instructional sessions with the researcher per week for eight weeks., from Week 2 through Week 9. The Intervention sessions will take place during normal class times, with precise time and place to be determined in consultation with school staff. The intent is to run the Intervention during normal literacy instruction time.

The study primarily seeks to recruit students with writing difficulties to take part in an intervention and is not bounded by obtaining teacher participation. If a classroom teacher declines participation in the interview there will be no impact on student consent or participation.

I am seeking participants with the following characteristics:

- Year 8 (age 11-13)
- Enrolled in mainstream, English-medium school
- Assessed as writing at or below Level 3P by participating school
- Not eligible for English for Speakers of Other Languages support
- No identified behavioural problems
- Not currently receiving in-school writing support

If your school agrees to take part in the study, Year 8 teachers will be requested to nominate a pool of individuals meeting the eligibility criteria. I will then randomly select six (6) participants from all students who a) meet the eligibility criteria, and b) are available and willing to participate for the duration of the intervention. This recruitment process will continue until the required number of participants have returned consent.

The initial eight (8) intervention sessions as well as one session per week for the following six (6) weeks will be recorded and then transcribed. Observations will be recorded in writing during each session. Written work produced during the sessions will be labelled by participant name and collected as data. This includes writing samples and planning notes. All interviews will also be recorded. Teachers and students will be provided with an opportunity to review the interview transcriptions and ask questions or make comments. All raw data, to include field notes of observations, writing samples and recorded and transcribed interview data will be stored by the researcher in a secure, locked cabinet for the duration of the study. They will then be converted to electronic format. The supervisor will be responsible for the storage and destruction of the electronic data. Data will be stored on the supervisor's password protected drive on the University of Canterbury's servers. After five years it will be destroyed. There is no follow-up involvement anticipated to this study.

In the course of this study students will be withdrawn from class to participate in intervention sessions. Small group withdrawal is common and this will take place during class time and on school premises. To minimise any social risks, the time and place for withdrawal will be decided in consultation with school staff. Efforts will be made to find a withdrawal time limiting the potential for students to miss out on other social or learning opportunities. The intervention sessions will also be limited to 20 minutes in duration. Students will be interviewed in a one-on-one withdrawal situation. The interview duration will be limited to 15 - 20 minutes to mitigate time lost from other classroom activities. Students may find the sessions difficult or feel stressed during the sessions or the interviews. They will be provided with the right to take breaks and will be encouraged to speak to their parents/whanau/aiga/caregivers or teachers should they feel uncomfortable. To minimise safety risks the school will be asked to ensure recruited participants are not a behavioural risk. Also, the researcher will have successfully completed safety checks done in compliance with the Vulnerable Child Act prior to the start of the study or any interaction with the student participants. Participants and their caregivers will be advised of these risks and of their right to withdraw at any time or to ask questions should they become uncomfortable.

A thesis is a public document and will be available through the University of Canterbury Library. The results of the project may be published, but there will be complete confidentiality of data gathered in this investigation: neither your school nor the identity of

any of the teacher and student participants will be made public. To ensure confidentiality, collected data will be accessible only by the researcher and supervisory university staff. Also, for the purposes of reporting findings and conclusions all participants will be assigned a pseudonym.

Participation in this study is voluntary and the School may withdraw participation at any stage. All participants in this study will also be informed of their right to stop participating at any time. Withdrawal of participation prior to 9 August 2019, will also include the withdrawal of any information provided; that data will be destroyed. In the case of withdrawal subsequent to 9 August 2019, anonymised data will still be used.

The project is being carried out as a requirement for the degree of Master of Education by Jeanne M. Pearce under the supervision of Dr. Alison Arrow, School of Teacher Education, University of Canterbury, who can be contacted at alison.arrow@canterbury.ac.nz. She will be pleased to discuss any concerns you may have about participation in the project.

This project has been reviewed and approved by the University of Canterbury Educational Research Human Ethics Committee, and participants should address any complaints to The Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

If your school agrees to participate in the study, you are asked to scan and email this completed consent form to jeanne.pearce@pg.canterbury.ac.nz by 22 July 2019. Please indicate to the researcher on the consent form if you would like the School to receive a copy of the summary of results of the project.

Ngā mihi nui,

Jeanne Pearce

Appendix D: Information Sheet for Tamariki / Students

Information Sheet for Tamariki/ Students

Jeanne M. Pearce, Graduate Student, School of Teacher Education
jeanne.pearce@pg.canterbury.ac.nz

4 June 2019

ERHEC Ref: 2019/12/ERHEC Application - Pearce

Title of Research Project: The Use of Instructional Rubrics to Support Learners with Writing Difficulties: A Mixed Methods Approach

My name is Jeanne and I am currently working towards a Master of Education at the University of Canterbury. I am focusing on ways to support writing in the mainstream classroom. The purpose of this research is to investigate whether an instructional rubric is a useful tool to help intermediate-school learners to improve their writing outcomes. During an eight-week intervention, participants will be taught how to use a rubric to help meet the purpose and goals associated with the comparison and contrast writing genre. The study will also explore student writing attitudes and behaviours.

We would like you to be a part of this project because you have been assessed as demonstrating difficulties in your writing development and your teacher thinks that you might benefit from learning additional writing strategies. If you agree to take part in this study, you will be asked to do the following:

- a) Participate in a face-to-face interview with the researcher to answer a set of questions about writing prior to an intervention called “Focus.” This interview will last for approximately 15 - 20 minutes.
- b) Attend four, twenty-minute instructional writing sessions each week for 8 weeks during Term 3 with some other students. Each session will involve a writing lesson on the compare and contrast genre. Some sessions will involve instruction on how to use a rubric. These sessions will take place during class-time.
- c) Produce one to two written pieces of work each week as writing samples. These will be produced during the 20-minute writing sessions.
- d) Participate in a face-to-face interview with the researcher to answer a set of questions about writing after the intervention. This interview will last for approximately 15 - 20 minutes.

I will record the interviews and some of the writing sessions. You can read the typed-up version of the interview, or have me read it to you, and then make comments or ask questions about it. I will also make some notes in a notebook as we do the sessions. The writing samples and planning notes you produce during the sessions will be collected. I will keep all of your information locked in a cupboard or on a password-protected computer drive and I will not use your name in the study. After the study the written and recorded information will be converted to an electronic format and stored on a password-protected server for 5 years and then destroyed.

After the intervention your teacher will be interviewed and requested to provide some feedback about any changes in your writing attitude or writing behaviours and quality. The study is not bounded by obtaining teacher participation. The study primarily seeks to recruit students with

writing difficulties to take part in an intervention. If a classroom teacher declines participation there will be no impact on student consent or participation.

To minimise safety risks, students presenting a behavioural risk will be excluded from the study. The researcher will have successfully completed safety checks done in compliance with the Vulnerable Child Act prior to the start of the study or any interaction with the student participants. You will be missing some class time to participate in the interviews and writing sessions. We will try to schedule these times so that you do not miss out on class activities. The intervention and interview sessions will also be limited to a maximum 20 minutes. Some of the session tasks or interview questions might seem hard or make you uncomfortable. You can take a break if you need to or stop participating at any time. You can also talk to your parents/whānau/aiga/caregivers or teachers if you have any questions or change your mind about this project. Your participation in this study is voluntary. You can stop participating at any time. Withdrawal of participation prior to 9 August 2019 will also include the withdrawal of any information provided; that data will be destroyed. In the case of withdrawal subsequent to 9 August 2019, anonymised data will still be used.

This project has been reviewed and approved by the University of Canterbury Educational Research Human Ethics Committee, and participants should address any complaints to The Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

If you are happy to participate then please:

- sign the assent form
- scan and email to jeanne.pearce@pg.canterbury.ac.nz, or, return to [REDACTED] in Room 7 by 22 July 2019.

Ngā mihi nui,
Jeanne M. Pearce

Appendix E: Teacher Information Letter

Information Sheet for Teachers

Jeanne M. Pearce, Graduate Student, School of Teacher Education
jeanne.pearce@pg.canterbury.ac.nz

20 May 2019

ERHEC Ref: 2019/12/ERHEC Application - Pearce

Title of Research Project: The Use of Instructional Rubrics to Support Learners with Writing Difficulties: A Mixed Methods Approach

My name is Jeanne Pearce. I am currently working towards a Master of Education at the University of Canterbury. I am focusing on ways to support writing in the mainstream classroom. The purpose of this research is to investigate the use of an instructional rubric by intermediate-school learners with writing difficulties during the draft phase of the writing process. During an eight-week intervention, participants will be taught how to use a rubric to help them meet the purpose and goals associated with the comparison and contrast writing genre. The study will also explore student writing attitudes and behaviours.

You have been approached to take part in this study because you teach a Year 8 cohort. Your involvement in the project would be to identify any Year 8 students who meet the following criteria:

- Assessed as writing at or below Level 3P
- Not identified as eligible for English for Speakers of Other Languages support
- No identified behavioural problems
- Not currently receiving in-school writing support

If one or more of your students are chosen for participation in this study you are also requested to take part in a post-intervention interview. The purpose of the post-intervention interview is to obtain information about any observed changes in writing behaviour or achievement in students who took part in the study. This interview will be of approximately 10 minutes duration and will be held at a time and place convenient for you, towards the end of Term 3, 2019. You will be provided with an opportunity to review the transcript of the post-intervention interview for accuracy. This study primarily seeks to recruit students with writing difficulties to take part in an intervention. If you decline participation in the interview there will be no impact on student participation.

A thesis is a public document and will be available through the University of Canterbury Library. The results of the project may be published, but you may be assured of the complete confidentiality of data gathered in this investigation: your identity will not be made public. To ensure confidentiality, collected data will be accessible only by the researcher and supervisory university staff. Also, for the purposes of reporting findings and conclusions the school and all participants will be referred to only by pseudonyms. All raw data, to include field notes of observations, writing samples and recorded and transcribed interview data will be stored by the researcher in a secure, locked cabinet for the duration of the study. They will then be converted to electronic format. The supervisor will be responsible for the storage and destruction of the electronic data. Data will be stored on the supervisor's password protected drive on the

University of Canterbury's servers. After five years it will be destroyed. There is no follow-up involvement anticipated to this study.

In the performance of the tasks and application of this study students will be withdrawn from class to participate in the intervention sessions. Small group withdrawal is common and this will take place during class time and on school premises. To minimise any social risks, the time and place for withdrawal will be decided in consultation with school staff. Efforts will be made to find a withdrawal time limiting the potential for students to miss out on other social or learning opportunities. The intervention sessions will also be limited to 20 minutes in duration. Students will be interviewed in a one-on-one withdrawal situation. The interview duration will be limited to 15 - 20 minutes to mitigate time lost from other classroom activities. Students may find the sessions difficult or feel stressed during the sessions or the interviews. They will be provided with the right to take breaks and will be encouraged to speak to their parents/whanau/aiga/caregivers or teachers should they feel uncomfortable. To minimise safety risks, students presenting a behavioural risk will be excluded from the study. Also, the researcher will have successfully completed safety checks done in compliance with the Vulnerable Child Act prior to the start of the study or any interaction with the student participants. Participants and their caregivers will be advised of these risks and of their right to withdraw at any time or to ask questions should they become uncomfortable.

Should you become uncomfortable in the course of participating in the interview you can stop participating at any time without providing a reason. Participation is voluntary and you have the right to withdraw at any time. Withdrawal of participation prior to 9 August 2019 will also include the withdrawal of any information provided; that data will be destroyed. If you choose not to participate in the interview component of this study this will not have any impact on student participation.

The project is being carried out as a requirement for the degree of Master of Education by Jeanne M. Pearce under the supervision of Dr. Alison Arrow, School of Teacher Education, University of Canterbury, who can be contacted at alison.arrow@canterbury.ac.nz. She will be pleased to discuss any concerns you may have about participation in the project.

This project has been reviewed and approved by the University of Canterbury Educational Research Human Ethics Committee, and participants should address any complaints to The Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

If you agree to participate in the study, you are asked to scan and email this completed consent form to jeanne.pearce@pg.canterbury.ac.nz by 22 July 2019.

Ngā mihi nui,

Jeanne M. Pearce

Appendix F: Parent / Whānau / Aiga / Caregiver Information Letter

Information Sheet for Parents/Whānau/Aiga/Caregivers

Jeanne M. Pearce, Graduate Student, School of Teacher Education
jeanne.pearce@pg.canterbury.ac.nz

4 June 2019

ERHEC Ref: 2019/12/ERHEC Application - Pearce

Title of Research Project: The Use of Instructional Rubrics to Support Learners with Writing Difficulties: A Mixed Methods Approach

My name is Jeanne Pearce. I am currently working towards a Master of Education at the University of Canterbury. I am focusing on ways to support writing in the mainstream classroom. The purpose of this research is to investigate the use of an instructional rubric by intermediate-school learners with writing difficulties during the draft phase of the writing process. During an eight-week intervention, participants will be taught how to use a rubric to help them write a specific type of text. The study will also explore student writing attitudes and behaviours.

Your child has been approached to take part in this study because their teacher has identified that he or she demonstrates difficulties in writing development and will potentially benefit from learning additional writing strategies. The teachers will be interviewed post-intervention and be asked to give feedback on students who participated in the intervention. The study primarily seeks to recruit students with writing difficulties to take part in an intervention. If a classroom teacher declines participation there will be no impact on student participation.

If you choose to allow your child to take part in this study, his or her involvement in this project will be to answer a set of pre-intervention and post-intervention questions and to attend writing sessions for eight-weeks during school-time. The writing sessions will each be 20-minutes in duration and will be held four days a week on school premises during class time. The interviews will each be 15 - 20 minutes in duration and held on school premises during class time. The entire study will take place during Term 3, 2019. There is no follow-up involvement anticipated to this study.

The initial four (4) intervention sessions as well as one session per week for the following six (6) weeks will be recorded and then transcribed. Observations will also be recorded in writing during each session. Written work produced during the sessions will be collected as data. This includes writing samples and planning notes. Both interviews will also be recorded and then transcribed. Students will be provided with the transcripts of these interviews and given an opportunity to ask questions and respond.

A thesis is a public document and will be available through the University of Canterbury Library. The results of the project may be published, but you may be assured of the complete confidentiality of data gathered in this investigation; your child's identity will not be made public. To ensure confidentiality, collected data will be accessible only by the researcher and supervisory university staff. Also, for the purposes of reporting findings and conclusions the school and all participants will be referred to only by pseudonyms. All raw data, to include field notes of observations, writing samples and recorded and transcribed interview data will

be stored by the researcher in a secure, locked cabinet for the duration of the study. They will then be converted to electronic format. The supervisor will be responsible for the storage and destruction of the electronic data. Data will be stored on the supervisor's password protected drive on the University of Canterbury's servers. After five years it will be destroyed.

In this study students will be withdrawn from class to participate in intervention sessions. Small group withdrawal from classrooms is common and this will take place during class time and on school grounds. To minimise any social risks, the time and place for the sessions will be decided in consultation with school staff. Efforts will be made to find a time where students will not miss out on other social or learning opportunities. The intervention sessions will also be limited to 20 minutes in duration. Students will be interviewed in a one-on-one withdrawal situation. The interview duration will be limited to 15 - 20 minutes to mitigate time lost from other classroom activities. Students may find the sessions difficult or feel stressed during the sessions or the interviews. They will be provided with the right to take breaks and will be encouraged to speak to their parents/whanau/aiga/caregivers or teachers should they feel uncomfortable. To minimise safety risks, students presenting a behavioural risk will be excluded from the study. Also, the researcher will have successfully completed safety checks done in compliance with the Vulnerable Child Act prior to the start of the study or any interaction with the student participants. Participants will be advised of these risks and of their right to withdraw at any time or to ask questions should they become uncomfortable.

Participation in this study is voluntary. You have the right to withdraw your child at any stage. Withdrawal of participation prior to 9 August 2019 will also include the withdrawal of any information provided; that data will be destroyed. In the case of withdrawal subsequent to 9 August 2019, anonymised data will still be used.

The project is being carried out as a requirement for the degree of Master of Education by Jeanne M. Pearce under the supervision of Dr. Alison Arrow, School of Teacher Education, University of Canterbury, who can be contacted at alison.arrow@canterbury.ac.nz. She will be pleased to discuss any concerns you may have about participation in the project.

This project has been reviewed and approved by the University of Canterbury Educational Research Human Ethics Committee, and participants should address any complaints to The Chair, Educational Research Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

If you agree to participate in the study, you are asked to complete the consent form and either scan and email this completed consent form to jeanne.pearce@pg.canterbury.ac.nz, or, return to [REDACTED] in Room 7 by 22 July 2019. Please indicate to the researcher on the consent form if you would like to receive a copy of the summary of results of the project.

Ngā mihi nui,
Jeanne M. Pearce

Appendix G: Principal/School Consent Form

Consent Form for School Principal

Jeanne M. Pearce, Graduate Student, School of Teacher Education
jeanne.pearce@pg.canterbury.ac.nz

20 May 2019

ERHEC Ref: 2019/12/ERHEC Application - Pearce

Title of Research Project: The Use of Instructional Rubrics to Support Learners with Writing Difficulties: A Mixed Methods Approach

- I have been given a full explanation of this project and have had the opportunity to ask questions.
- I understand what is required of the School if I agree that the School may take part in the research.
- I understand that participation is voluntary and I may withdraw the School from participation at any time. Withdrawal of participation prior to 9 August 2019 will also include the withdrawal of any information provided; that data will be destroyed. In the case of withdrawal subsequent to 9 August 2019, anonymised data will still be used.
- I understand that any information or opinions will be kept confidential to the researcher and supervisory University of Canterbury staff and that any published or reported results will not identify the participants or this School. I understand that a thesis is a public document and will be available through the University of Canterbury Library.
- I understand that all data collected for the study will be kept in a secure location and/or in password protected electronic form and will be destroyed after five years.
- I understand the risks associated with taking part and how they will be managed.
- I understand that I can contact the researcher [Jeanne M. Pearce, jeanne.pearce@pg.canterbury.ac.nz] or supervisor [Dr. Alison Arrow, alison.arrow@canterbury.ac.nz] for further information. If I have any complaints, I can contact the Chair of the University of Canterbury Educational Research Human Ethics Committee, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz)
- I would like the School to receive a summary of the results of the project.

By signing below, I agree to allow the School to participate in this research project.

Signature

Date

Email address (for report of findings, if applicable): _____

Please scan and email this completed consent form to jeanne.pearce@pg.canterbury.ac.nz by

22 July 2019.

Appendix H: Teacher Consent Form

Consent Form for Teachers

Jeanne M. Pearce, Graduate Student, School of Teacher Education
jeanne.pearce@pg.canterbury.ac.nz

ERHEC Ref: 2019/12/ERHEC Application - Pearce

Title of Research Project: The Use of Instructional Rubrics to Support Learners with Writing Difficulties: A Mixed Methods Approach

- I have been given a full explanation of this project and have had the opportunity to ask questions.
- I understand what is required of me if I agree to take part in the research.
- I understand that participation is voluntary and I may withdraw at any time. Withdrawal of participation prior to 9 August 2019 will also include the withdrawal of any information I have provided; that data will be destroyed.
- I understand that any information or opinions provided will be kept confidential to the researcher and supervisory University of Canterbury staff and that any published or reported results will not identify the participants or their institution. I understand that a thesis is a public document and will be available through the UC Library.
- I understand that all data collected for the study will be kept in a secure location and/or in password protected electronic form and will be destroyed after five years.
- I understand the risks associated with taking part and how they will be managed.
- I understand that I can contact the researcher [Jeanne M. Pearce, jeanne.pearce@pg.canterbury.ac.nz] or supervisor [Dr. Alison Arrow, alison.arrow@canterbury.ac.nz] for further information. If I have any complaints, I can contact the Chair of the University of Canterbury Educational Research Human Ethics Committee, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz)

By signing below, I agree to participate in this research project.

Signature

Date

Email address (for report of findings, if applicable):

Please scan and email this completed consent form to jeanne.pearce@pg.canterbury.ac.nz by 22 July 2019.

Appendix I: Parent / Whānau / Aiga / Caregiver Consent Form

Consent Form for Parents/Whānau/Aiga/Caregivers

Jeanne M. Pearce, Graduate Student, School of Teacher Education
jeanne.pearce@pg.canterbury.ac.nz

ERHEC Ref: 2019/12/ERHEC Application - Pearce

Title of Research Project: The Use of Instructional Rubrics to Support Learners with Writing Difficulties: A Mixed Methods Approach

- I have been given a full explanation of this project and have had the opportunity to ask questions.
- I understand what is required of my child if I agree that he/she may take part in the research.
- I understand that participation is voluntary and I may withdraw my child at any time if I am uncomfortable. Withdrawal of participation prior to 9 August 2019 will also include the withdrawal of any information provided; that data will be destroyed. In the case of withdrawal subsequent to 9 August 2019, anonymised data will still be used.
- I understand that any information or opinions my child provides will be kept confidential to the researcher and supervisory University of Canterbury staff and that any published or reported results will not identify the participants or their school. I understand that a thesis is a public document and will be available through the University of Canterbury Library.
- I understand that all data collected for the study will be kept in a secure location and/or in password protected electronic form and will be destroyed after five years.
- I understand the risks associated with taking part and how they will be managed.

- I understand that I can contact the researcher [Jeanne M. Pearce, jeanne.pearce@pg.canterbury.ac.nz] or supervisor [Dr. Alison Arrow, alison.arrow@canterbury.ac.nz] for further information. If I have any complaints, I can contact the Chair of the University of Canterbury Educational Research Human Ethics Committee, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz)
- I would like a summary of the results of the project.

By signing below, I agree to allow my child to participate in this research project.

Signature

Date

Email address (for report of findings, if applicable): _____

Please scan and email this completed consent form to jeanne.pearce@pg.canterbury.ac.nz, or, return to [REDACTED] in Room 7 by 22 July 2019.

Appendix J: Assent Form for Tamariki / Students

Jeanne M. Pearce, Graduate Student, School of Teacher Education
Email: jeanne.pearce@pg.canterbury.ac.nz

ERHEC Ref: 2019/12/ERHEC Application - Pearce

Title of Research Project: The Use of Instructional Rubrics to Support Learners with Writing Difficulties: A Mixed Methods Approach

- I have been asked to participate in a project about supporting writing using an instructional rubric.
- I understand that a researcher will come to my school and will ask me to do some activities with her that relate to my writing.
- I understand that the researcher will have completed safety checks prior to the start of this study.
- I understand that I will take part in a writing programme for 20 minutes, four days each week over one term with some other students and that I will be missing class time to participate.
- I know that some tasks will be audio recorded and I can tell the Researcher if it is making me uncomfortable.
- I understand that I will be able to read (or have read to me) the transcripts of the interviews and ask questions.
- I understand that any information provided will be kept confidential to the researcher and supervisory University of Canterbury staff and that any published or reported results will not identify me by name.
- I understand that I can take breaks or talk to my parents/whānau/aiga/caregiver or my teacher if I have any questions or feel uncomfortable at any time.
- My parents/whānau/aiga/caregiver will be given the opportunity to get a report from the project once it is completed.

- I have read (or had read to me) the information sheet for the project.
- I understand that participation is voluntary and I may withdraw at any time. Withdrawal of participation prior to 9 August 2019 will also include the withdrawal of any information provided; that data will be destroyed. In the case of withdrawal subsequent to 9 August 2019, anonymised data will still be used.
- I understand that I can contact the researcher [Jeanne M. Pearce, jeanne.pearce@pg.canterbury.ac.nz] or supervisor [Dr. Alison Arrow, alison.arrow@canterbury.ac.nz] for further information. If I have any complaints, I can contact the Chair of the University of Canterbury Educational Research Human Ethics Committee, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz)

By signing below, I agree to participate in this research project.

Your name (please print):

Signature: Date:

Please return this form to [REDACTED] in Room 7 by 22 July 2019.

Appendix K: Student Participant Pre-Intervention Interview Protocol

1. Do you like to write?
2. Do you find writing easy or hard?
3. What parts of writing are easy?
4. What parts of writing are hard?
5. Do you enjoy sharing your writing with others?
6. Do you think you are a good writer?
7. How would you describe good writing?
8. What qualities do teachers think make a piece of writing good?
9. How is writing useful to you?
10. What kinds of things would you not be able to do if you could not write?
11. How do you plan your writing?
12. What is compare and contrast writing?
13. What is a rubric?
14. How have you or your teachers used a rubric?
15. What tools have your teachers used that have helped you with your writing?

Appendix L: Student Participant Post-Intervention Interview Protocol

1. What is the purpose of compare and contrast writing?
2. What features do you need to include to write a good compare and contrast essay?
3. What is a rubric?
4. How can you use a rubric to help you with your writing?
5. Does using a rubric make your writing better?
6. Does using a rubric making writing easier?
7. What did you like about the rubric?
8. What changes would you make to the rubric?
9. Do you like to write?
10. Do you enjoy sharing your writing with others?
11. Do you think you are a good writer?
12. How would you describe good writing?

Appendix M: Post-Intervention Teacher Interview Protocol

1. What have you observed in participant writing behaviours or outcomes?
2. Have they shown evidence of planning before writing?
3. Have they shown evidence of following their plans?
4. Have they demonstrated any increased awareness of writing purpose?
5. Have they evidenced any increased awareness of format or organisation?
6. Have they been able to increase the number of ideas transferred into their writing outcomes?
7. Have they shown more attention to including genre features in their writing?
8. In general, have you noticed any changes in the writing behaviours or writing quality of any of the participants?

Appendix N: Paired Texts and Idea Scoring Guides

Paired Texts	Number of Available Ideas
1. Grizzly Bears / Polar Bears	23
2. The Ancient Olympic Games / The Modern Olympic Games	20
3. Lemons / Oranges	18
4. Harry Potter / Lord Voldemort	27
5. Spiderman / Superman	26
6. Rats / Mice	15
7. Australia / New Zealand	14
8. Lions / Tigers	27

Grizzly Bears

The grizzly bear is commonly called a brown bear. They are the second largest land carnivore in North America. Brown bears also live in parts of Europe and Asia. They prefer to live in forested mountains, meadows, or river valleys. Grizzlies are often dark brown, but can vary from very light cream to black. The long hairs on their backs and shoulders frequently have white tips and make the bears look "grizzled" or grayish. Their dark fur makes it difficult to see them at night. They also have a hump on their backs and very long claws. These traits help to make the brown bear a great digger. Brown bears may reach up to seven feet tall and males may weigh up to 700 pounds. Brown bears eat mostly grass, roots, and berries. Brown bears may eat fish, insects, and ground squirrels, or larger mammals if they can catch them. They like to live in solitude (by themselves) and usually hibernate from January or February until April or May.

Polar Bears

Polar bears are the largest land carnivore in the world. They only live near ice packs in the Arctic, where wind and water currents are constantly melting and refreezing the ice. Polar bears have thick, warm fur and a layer of blubber or fat to keep them warm in the extreme cold temperatures of the Arctic. Their fur is white, making it hard to see them in the light or against the snow and ice. Their feet are large and flat like oars, making them very good swimmers. Polar bears may reach 9 feet tall and male bears may weigh up to 1,320 pounds. Polar bears feed mostly on seals. They will occasionally eat walrus, beluga whales, and birds' eggs, but their main source of food comes from seals. Polar bears rarely eat any type of plants or vegetation. Adult polar bears are usually solitary and do not hibernate.

Grizzly Bears / Polar Bears

Category

1. Bears (S)
2. Carnivores (S)
3. Land (S)
4. Mammals (S)
5. Grizzly also called “brown bear” (D)

Appearance

6. Size (S/D)
7. Fur, eyes, teeth, nose, mouth, claws (S)
8. Brown (D)
9. White (D)
10. Blubber (D)
11. Hump (D)

Characteristics

12. Live in Arctic (D)
13. Live in North America / Europe / Asia (D)
14. Live in forests (D)
15. Live in icy regions (D)
16. Eat plants (D)
17. Eat meat (S)
18. Diggers (D)
19. Swimmers (D)
20. Sharp claws (D)
21. Flat paws (D)
22. Hibernate (D)
23. Solitary (S)

The Ancient Olympic Games

The first Olympic Games were held around 776 BC in Greece. The games were a way to honour the Greek god Zeus. They were held every four years in the village of Olympia. The first games actually only had one race. It was called the “stade.” This was a running race where men ran across the length of the stadium. Over the years more running races were added to the Olympics. As time went on other games, like boxing, wrestling, chariot racing, the long jump, javelin throwing, and discus throwing, were also added. In the ancient Olympic games only free, Greek-speaking men could participate. Women were not allowed to take part in the games. In fact, they were not even allowed to watch the games. There was one winner and his prize was a crown of olive leaves symbolizing hope and peace.

Modern Olympic Games

Today the Olympic games are divided into winter and summer games. These games are held every two years. They are held in cities all around the world. These games are held to encourage peace and cooperation. Today’s Olympic games have some of the same races played in the ancient games. We have boxing, wrestling, running, and throwing games. Many games have been added to the modern Olympic games. The games include skating, skiing, swimming, and gymnastics. In the modern Olympic games, men and women from all nations are allowed to participate. Many athletes win prizes. Prizes in today’s Olympics are medals, which can be bronze, silver, or gold.

The Ancient Olympic Games / The Modern Olympic Games

Setting

1. Held in Ancient Greece (D)
2. Held all over the world (D)
3. Held every four years (D)
4. Held every two years (D)
5. Held to honour Zeus (D)
6. Held to encourage peace (D/S)

Content

7. Running race (S)
8. Other races added (S): boxing, wrestling, long jump, javelin, discus
9. different races: chariot races (D) / skating, skiing, swimming, gymnastics (D)

Participation

10. Only free men (D)
11. Men and women (D)
12. Greek men (D)
13. Men and women from all countries (D)
14. Men watch (D)
15. Men and women watch (D)
16. Prizes – crown (D)
17. Medals (D)
18. One winner (D)
19. Multiple winners (D)
20. Athletic events (S)

Lemons

Lemons are tart, yellow fruits that grow on a small tree. Lemons are citrus fruits. Lemon trees produce sweet-smelling flowers that are white on top and reddish purple on the bottom. The fruits, or lemons, grow from these flowers. Lemons are shaped like an oval with a bump on one end. Their rind, or skin, is thick. It starts out green and turns yellow when the fruit is ripe. Inside each fruit is juicy pulp. The juice of lemons is tart, or sour, because it contains a substance called citric acid. Lemon juice is also rich in vitamin C. People use lemons to flavour many kinds of food including pies, drinks, vegetables, and fish. People also use lemons to make jellies, soaps, perfumes, and medicines.

Oranges

The orange is a sweet citrus fruit that grows on trees in warm climates. The tree produces beautiful white blossoms. Around 85% of all oranges produced are used for juice. Oranges are also eaten raw or made into marmalade for toast. Oranges are round and both their outside rind and their inside pulp are orange. Oranges have a high amount of vitamin C. There are typically ten segments inside.

Lemons / Oranges

Category

1. Fruit (S)
2. Citrus family (S)
3. Grow on trees (S)
4. Flowers on trees (S)
5. Grow in warm climate (S)

Appearance

6. Skin/rind (S)
7. Yellow (D)
8. Orange (D)
9. Oval (D)
10. Round (D)

Characteristics

11. Tart (D)
12. Sweet (D)
13. High in vitamin C (S)
14. Use in drinks or made into juice (S)
15. Used to flavour foods (S)
16. Eaten fresh (D)
17. Made into perfumes / medicines (D)
18. Pulp (S)

Harry Potter

Harry Potter is the main character in J.K. Rowling's series of novels. When we first meet him, he is only 11 years old. He was orphaned as a baby when Lord Voldemort killed his parents. He is known as the "boy who lived" because his mother saved him from Lord Voldemort's wand. Harry grew up with the Dursleys until he discovered he was a wizard. He went to Hogwarts to learn about magic. There he met many friends in his house, Gryffindor. He also went on many adventures trying to defeat Lord Voldemort and save the wizarding world from evil. Harry is smart and also caring, brave, humble and forgiving. You can recognise him from the scar on his forehead in the shape of a lightning bolt. He also wears glasses. He speaks both English and Parseltongue. His greatest strength is love.

Lord Voldemort

Lord Voldemort is the name taken by the wizard Tom Riddle when he turned to dark magic. He is the most feared wizard of all time. He is referred to as "He Who Shall Not Be Named." He wants to destroy all muggles and mudbloods, or those who are not pure-blooded wizards. Tom Riddle grew up in an orphanage because his parents were dead. He was human but parts of his soul were destroyed so he is now a half-souled snake bodied being. Throughout the books he tries to regain his human form. He has no friends, only people who fear him enough to do what he demands. He is cruel and greedy but magically talented and very intelligent. His symbol is a snake with a skull. His greatest weakness is love.

Harry Potter / Lord Voldemort

Character Traits

1. Harry is good. (D)
2. Voldemort is evil. (D)
3. Smart (S)
4. Parseltongue (S)
5. Harry's greatest strength is love (D)
6. Voldemort's greatest weakness is love (D)
7. Fly with brooms (S)

Biographical Information

8. Characters in a series of novels by J. K. Rowling (S)
9. Characters in movies
10. Wizards (S)
11. Orphans (S)
12. Harry has a lot of friends / Voldemort does not have friends (D)
13. Harry has a nickname, "The Boy Who Lived" (S) / Voldemort has a nickname "He Who Shall Not Be Named" and used to be called Tom Riddle (S)
14. Harry is a Gryffindor (D)
15. Voldemort was a Slytherin (D)
16. Went to Hogwarts
17. Harry is mortal (D)
18. Voldemort is immortal (D)

Appearance

19. Harry is a young boy (D)
20. Voldemort is an adult (D)
21. Harry wears glasses (D) / Voldemort does not wear glasses (D)
22. Harry has a scar on his forehead in the shape of a lightning bolt (D)
23. Voldemort has no nose (D)
24. Harry is human. (D)
25. Voldemort was human but takes the form of a half-souled snake being

Spiderman

Spiderman is a comic book character. There have also been movies made about Spiderman. Spiderman is actually a human named Peter Parker. His parents died when he was young. He works for a newspaper but is really interested in science. During one of his science experiments he was bitten by a radioactive spider. Since then he has heightened human senses, or “spidey senses”. He can run, jump, and climb really quickly. He is also stronger than the average human and can shoot webs from his wrists. He wears a mask but not a cape. His super suit is red and blue. He is still mortal. He likes to be alone but uses his powers and the name Spiderman to fight crime.

Superman

Superman is the name of a comic book and movie hero. Superman was born as Kal-El on the planet Krypton. When his planet was about to be destroyed his parents sent him to planet Earth. There he was raised by a human couple and given the name Clark Kent. He had to learn how to restrain his powers so that he did not destroy the Earth. Superman is immortal. He has unlimited strength and can shoot lasers out of his eyes. He also has x-ray vision and can fly. He wears a cape, but no mask. His super suit is red and blue. Using his secret identity, he works as a newspaper reporter. When Superman shows up to fight crime, Clark Kent is never around. Superman has a weakness: kryptonite. He also has a secret lair called the Fortress of Solitude.

Spiderman / Superman

Biography

1. Orphan (S)
2. Works for newspaper (S)
3. Fights crime (S)
4. Born on Earth (D)
5. Born on another planet (D)
6. Superheroes (S)
7. Comic book character (S)
8. Movie character (S)

Characteristics

9. red and blue suit (S)
10. mask (D)
11. Cape (D)
12. Human
13. Immortal (D)
14. Pseudonym (S)
15. Like solitude (S)
16. Has Fortress of Solitude (D)

Powers

17. Shoots webs from wrists (D)
18. Climbs (D)
19. Flies (D)
20. X-ray vision (D)
21. Shoots lasers from eyes (D)
22. Strength (S/D)
23. Born with powers
24. Bitten by spider (D)
25. Weakness is Kryptonite (D)
26. Spidey senses (D)

Rats

Rats are rodents and members of the Muridae family. These animals are mammals. There are many different species of rats. One common type of rat is the roof rat. It has a skinny body and is bigger than a mouse. This type of rat has a pointed nose, called a snout, and large ears. Rats are very careful creatures. They avoid new things. They will visit something new many times before becoming used to it or trying to explore it. Rats are nocturnal. They have bad eyesight but their other senses are strong. They hide in the daytime and live mostly in walls, roofs, or in burrows they dig underground. They come out searching for water or food. Rats are strong swimmers and can even enter buildings through sewer pipes.

Mice

The mice commonly found in houses are rodents which are members of the Muridae family. They are quite small mammals. Mice have pointy noses and very large ears. Mice are curious creatures, always exploring new places. In fact, if you leave traps around mice are likely to get caught right away. Mice like to eat grains and plants, but they will eat other things. They make a nest in a hidden area somewhere close to food. They live both indoors and outdoors, in the country and in the city. You might not often see mice because they are nocturnal, most active between dusk and dawn. They do not like bright lights and only come out in the day if they are looking for food. They are athletic, able to stand up on their hind legs supported by their tails. They are also good at running, jumping, swimming and climbing. Mice can even climb up walls.

Rats / Mice

Category

1. Animals (S)
2. Mammals (S)
3. Muridae family (S)
4. Rodents (S)

Appearance

5. Size (D)
6. Pointy nose (S)
7. Large ears (S)
8. Fur (S)

Characteristics

9. Cautious (D)
10. Curious (D)
11. Nocturnal (S)
12. Live in burrows underground or in walls (D)
13. Live in nests in the country and city, inside and outside (D)
14. Strong swimmers (S)
15. Athletic (D)

Australia

Australia is the world's 6th largest country by area. It is located in the Pacific Ocean in the southern hemisphere. Due to its large size and isolation from the rest of the world, Australia is sometimes known as the 'island continent'. It is estimated the humans have lived in Australia for around 45000 years. Australia was a colony of Britain and its flag is based on the British flag, or Union Jack. It also features the Southern Cross, a constellation seen in the sky in the southern hemisphere. Four of the five stars in Australia's Southern Cross are white, with seven points; the other smaller star, tiny Epsilon Cru, being the exception with only five points. The flag also has a big, seven-pointed star, the federation star, representing the states of Australia. Australia is governed by a Parliament. The indigenous people of Australia are Australian Aborigines and Torres Strait Islanders. A desert area known as the 'outback' covers much of the land. Australia also has mountains and rivers and rainforests as well as the world's largest reef system, the Great Barrier Reef, off its north-eastern coast. Australia is home to a variety of unique animals, including the koala, kangaroo, emu, kookaburra and platypus. Although they usually keep to themselves, there are a range of dangerous snakes in Australia, such as the Brown Snake, Tiger Snake and Taipan. Australia has over 750 different reptile species, more than any other country in the world.

New Zealand

New Zealand is a country in the southern hemisphere. It is located in the Pacific Ocean and features two main islands, the North Island and the South Island, as well as other smaller ones. Other smaller islands include Stewart Island, Waiheke Island, Chatham Island, Great Barrier Island and more, although many are uninhabited. The official spoken languages of New Zealand are English and Te Reo Māori. Māori are the indigenous Polynesian people of New Zealand. The Māori name for New Zealand is Aotearoa. The Treaty of Waitangi was signed in 1840 between the British and Māori, making New Zealand a colony of the British Empire. New Zealand's flag is still based on the British flag. It has a blue background and features a red Union Jack. It also includes the Southern Cross, a constellation seen in the sky in the southern hemisphere. New Zealand's flag shows four stars, which are red, five-pointed and bordered. New Zealand's government is a parliamentary system. New Zealand has forests, mountains, rivers and glaciers. Due to its isolation, New Zealand has developed unique animal and plant life. The bird species of New Zealand are particularly diverse, including alpine parrots and ground dwelling Kiwis.

Australia / New Zealand

Geography

1. Countries (S)
2. Islands (S)
3. Continent (D)
4. Southern Hemisphere (S)

Politics

5. British Colonial past (S)
6. Indigenous population (S)
7. Parliamentary government with Prime Minister (S)
8. Flag (S)
9. Union Jack (S)
10. Southern Cross (S)
11. 5 stars (D)
12. 4 stars (D)
13. White (D)
14. Red (D)
15. Seven points (D)
16. 5 points (D)
17. Bordered (D)
18. Large star (D)

Characteristics

19. Rivers, mountains, forests (S)
20. Glaciers (D)
21. Reef (D)
22. Deserts (D)
23. Snakes (D)
24. Birds (S)
25. Kangaroos (D)
26. Isolated (S)
27. English speaking (S)

Lions

Lions are mammals. They are the second largest cat in the world. They mainly live in the grasslands and deserts of Africa and Asia. They are carnivores. They are at the top of the food chain and have no natural predators. However, lions are prized as trophies by hunters and have become a vulnerable species.

Lions are yellowish to brown in colour to help them hide in the tall grasses. Male lions have thick manes which protect their necks during a fight and make a lion look bigger than he really is. When attacking, the lion stands on three paws and uses the fourth paw to maul its opponent.

Lions are very social animals. They live in groups called prides and keep track of one another by roaring. Their powerful roars can be heard up to 8 km away. Male lions spend their time guarding their territory and their cubs. Female lions are the primary hunters of the group. They usually hunt at night. Lions are, however, quite lazy. They will steal kills from other carnivores or scavenge spoiled meat. Also, they can spend up to 20 hours a day sleeping or resting.

-

Tigers

The tiger is a mammal and the largest member of the feline species (cat family) in the world. Tigers are found in Asia and India. They are carnivores. They have no natural predators, but have suffered a destruction in habitat and have been threatened by hunting. They are now considered an endangered species.

Tigers are orange with more than 100 brown-black stripes all over the body. Each tiger has a unique pattern of stripes which allows them to camouflage in the shadows of the forest. They are also good swimmers and like to lay in the water to cool off.

Tigers are solitary animals who live and hunt alone. They will only eat meat that they have hunted. Tigers are fiercely aggressive. Their roars can be heard from 3 kilometers away. When fighting, the tiger balances itself on its hind legs and is able to attack using both front paws at the same time.

Lions / Tigers

Category

1. Animals (S)
2. Mammals (S)
3. Cat family (S)
4. Carnivores
5. Vulnerable/Endangered (S/D)

Habitat

6. Grassland and Desert (D)
7. Forest (D)
8. Africa and India (D)
9. Asia (D)

Traits

10. Hunters (D)
11. Solitary (D)
12. Live in prides (D)
13. Loud roar (S)
14. Camouflage (S/D)
15. Mane (D)
16. Yellow (D)
17. Stripes (D)
18. Orange and black (D)
19. Unique pattern (D)
20. No predators (S)
21. Eat big prey (S)
22. Kill own (D)
23. Scavenge (D)
24. Lazy (D)
25. Aggressive (D)
26. Attack with one paw (D)
27. Attack with two paws (D)

Appendix O: Initial Instructional Rubric

Instructional Rubric -- Genre: Expository / Compare and Contrast			
Writing Trait:	This trait examines the writer's ability to effectively <u>compare and contrast two topics/things</u> using appropriate comparison and contrast cue words and including descriptive details based on a pair of companion texts.		
Compare and Contrast Genre Elements	The writer should be able to identify <u>at least three similarities and three differences</u> and organise such into point-by-point themes or by similarity and difference-block format.		
The writer should be able to use <u>Compare-Contrast Cue Words</u> to support the discussion of similarities and differences and to transition between ideas.			both / same / like / similar / similarly / the same / as / also / have in common / too / differ / unlike, even though / although / on the other hand / instead / however / yet / but
		Scoring Guidelines:	What you should NOT do:
		Instructional Guidelines: What you SHOULD do	

The Introduction Paragraph	<p>a) identifies the two topics, A and B; b) tells the reader that A and B will be compared and contrasted; and, c) includes a hook to get the reader interested</p>	<p>a) 1 point b) 1 point c) 1 point</p>	<p>a) Name only one of the two topics to be compared and contrasted b) Write facts about one or both of the topics without comparing and contrasting them c) Have no hook to make reader want to read more</p>
Body Paragraphs	<p>ONE, the writer has: <i>At least Three</i> Theme Paragraphs, each identifying: a) the point of comparison between topics (theme) b) the similarities between A and B and c) the differences between A and B</p> <p>OR <u>Two</u> Block Paragraphs: a) one identifying <i>at least three</i> similarities between A and B, and, b) one identifying <i>at least three</i> differences between A and B</p> <p>TWO, the writer uses Compare-Contrast cue words to describe similarity and difference.</p>	<p>a) 1 point each themed paragraph b) 1 point each similarity c) 1 point each difference d) 2 points for Point-by-Point Structure</p> <p>OR</p> <p>a) 1 point each similarity b) 1 point each difference c) 1 point each paragraph d) 1 point for each cue word</p>	<p>a) List everything you know about one topic and then list everything you know about the other topic b) Identify only one theme or category of similarities and differences c) Identify only similarities or only differences d) List everything in one paragraph without using any CUE WORDS</p>
Conclusion	<p>The Conclusion Paragraph includes summary statements of the main similarity and/or difference with support.</p>	<p>1 point for a conclusion paragraph 1 point for each statement summarizing the main point(s) of similarity or difference discussed in the body paragraph</p>	<p>a) Introduce new ideas in the conclusion b) Relist everything you wrote in the main body paragraphs in a conclusion paragraph c) End after the main body paragraphs without a summary statement</p>

Appendix P: Revised Instructional Rubric

<p style="text-align: center;">Compare and Contrast Instructional Rubric: Write an essay describing the similarities and differences between two things.</p>		
	<i>What you SHOULD do:</i>	<i>What you should NOT do:</i>
Introduction	<ul style="list-style-type: none"> • NAME the 2 things • TELL the reader your purpose: that you will compare and contrast the 2 things (talk about how they are the same and how they are different); and, • Include a sentence (HOOK) to get the reader interested; hint about your personal opinion 	<ul style="list-style-type: none"> • Name only one of the two things • Write only a list of facts about one thing without saying how they are the same as or different from the other • Forget a hook to make reader want to read more
Main Body (Middle)	<p>a) Organise into PARAGRAPHS</p> <p>CHOOSE EITHER POINT-BY-POINT:</p> <ul style="list-style-type: none"> • TELL the reader what point you are using to compare the 2 things (THEME) • TELL the reader at least 3 SIMILARITIES between the 2 things and • TELL the reader at least 3 DIFFERENCES between the 2 things <p>OR CHOOSE BLOCK:</p> <ul style="list-style-type: none"> • One paragraph TELLS READER at least 3 similarities between the 2 things, and, • Another paragraph TELLS READER at least 3 differences between the 2 things <p>b) Add details to support your similarities and differences and make it interesting to read</p> <p>c) Use COMPARE-CONTRAST CUE WORDS to discuss similarities and differences</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>To COMPARE: both / same / like / similar / similarly / the same / as / also / have in common / too</p> <p>To CONTRAST: differ / different / in contrast / unlike, even though / although / on the other hand / instead / however / yet / but</p> </div>	<ul style="list-style-type: none"> • List everything you know about one thing and then list everything you know about the other thing • Name only one theme or category of similarities and differences • Name only similarities or only differences • List everything in one paragraph without using any CUE WORDS
Conclusion	<ul style="list-style-type: none"> • SUMMARISE the most important similarity between the two things • SUMMARISE the most important difference between the two things • TELL the reader WHY the similarities or differences are important; give your personal opinion about the comparison between the 2 things 	<ul style="list-style-type: none"> • Introduce new ideas • Relist everything you wrote in the main body paragraphs • End without a summary statement

Scoring Guide	
<i>Element</i>	<i>Point</i>
Inclusion of an introduction paragraph	1
Identification of the two things to be compared and contrasted	1
Informing the reader of the purpose to compare and contrast	1
Inclusion of a hook to gain reader interest	1
Expression of ideas as direct comparisons or contrasts	1
Utilisation of either the block or point-by-point organisational structure	1
Utilisation of cue words to make comparisons or contrasts	1
Inclusion of a separate conclusion paragraph	1
Summarisation of the key main body similarity/ies in the conclusion	1
Summarisation of the key main body difference/s in the conclusion	1
Inclusion of a concluding or personal opinion statement	1

Appendix Q: Participant Attendance

Week	Group	Student	Monday	Tuesday	Thursday	Friday	Totals
Term 3, Week 2 (Week 1 of Intervention)	Group A	Adam	Present	Absent	Present	Present	3
		Peter	Present	Present	Present	Present	4
		Rachel	Present	Present	Present	Present	4
	Group B	Theo	Present	Present	Present	Absent	3
		Kade	Present	Present	Present	Present	4
		Nancy	Present	Present	Present	Present	4
Term 3, Week 3 (Week 2 of Intervention)	Group A	Adam	Present	Present	Present	Present	4
		Peter	Present	Present	Present	Present	4
		Rachel	Present	Present	Present	Present	4
	Group B	Theo	Present	Present	Present	Present	4
		Kade	Present	Present	Present	Present	4
		Nancy	Present	Present	Present	Present	4
Term 3, Week 4 (Week 3 of Intervention)	Group A	Adam	Absent	Present	Present	Present	3
		Peter	Absent	Present	Present	Present	3
		Rachel	Present	Present	Present	Present	4
	Group B	Theo	Present	Present	Present	Present	4
		Kade	Present	Present	Present	Present	4
		Nancy	Present	Present	Present	Present	4

Term 3, Week 5 (Week 4 of Intervention)	Group A	Adam	Present	Present	Present	Present	4
		Peter	Present	Present	Present	Present	4
		Rachel	Lead Student for Assembly	Present	Present	Present	3
	Group B	Theo	Present	Present	Present	Present	4
		Kade	Present	Present	Present	Present	4
		Nancy	Present	Present	Present	Present	4
Term 3, Week 6 (Week 5 of Intervention)	Group A	Adam	Present	Present	Absent (Classroom commitment)	Present	3
		Peter	Present	Present	Present	Present	4
		Rachel	Present	Present	Absent (Classroom commitment)	Present	3
	Group B	Theo	Present	Absent (Keeping Ourselves Safe)	(Left early for classroom commitment)	Present	2.5
		Kade	Present	Present	Present	Present	4
		Nancy	Present	Present	Present	Absent (Classroom commitment)	3
Term 3, Week 7 (Week 6 of Intervention)	Group A	Adam	Absent (Classroom obligation)	Present	Cancelled due to School Activity	Present	2
		Peter	Present	Present		Present	3
		Rachel	Present	Present		Present	3
	Group B	Theo	Present	Present	Late		3
		Kade	Present	Present		Late	3
		Nancy	Present	Present		Present	3

Term 3, Week 8 (Week 7 of Intervention)	Group A	Adam	Present	Cancelled due to School Cultural Events	Present	2
		Peter	Absent		Present	1
		Rachel	Present		Present	2
		Theo	Present		Present	2
	Group B	Kade	Present		Present	2
		Nancy	Present		Absent	1
		Adam	Present	No further sessions		2
		Peter	Present			2
Term 3, Week 9 (Week 8 of Intervention)	Group A	Rachel	Present			2
		Theo	Present			2
		Kade	Present			2
	Group B	Nancy	Present			2

Appendix R: Compare and Contrast Lesson Protocol

Objectives

Students will be able to:

- Define the characteristics the comparison/contrast genre.
- Develop a comparison/contrast essay containing all genre elements.

Session One: Explicit Instruction (20 min)

1. Show students two different objects and identify the objective of comparing and contrasting the two. [Apple versus Banana]
2. Explore the meaning of the words compare and contrast.
 - *Comparison and contrast are ways of looking at objects and thinking about how they are similar (the same or alike) and different. When you compare, you are stating similarities. When you contrast, you are stating differences.*
3. There are two main reasons that people use comparison and contrast:
 - To Explain --You might compare and contrast to help someone understand which food items need to be refrigerated and which food items can be stored in a cabinet or in a bowl on the counter.
 - To Evaluate --You might compare and contrast kinds of food to show why one kind of food or brand of food is better than another. For example, apples are a better snack than butter. Other examples: car models / mobile phone plans.
4. Brainstorm characteristics of each item.

Apple	Banana
Fruit	Fruit
Grows on tree	Grows on tree
You can eat skin	You peel the skin before eating
Round	Elongated curved
Firm flesh	Soft flesh
Eat as a snack	Eat as a snack
Made into juice	
Made into breads or cakes	Made into breads or cakes

5. Highlight the similarities and differences between columns.

6. What points of comparison and contrast are there?

Example: Category / Description / Use

7. How do I organize comparison and contrast essays?

- i. Introduce the two items and let your audience know you are going to compare and contrast them. Find an interesting hook.

Many of us have tasted both apples and bananas. Of course, they are both fruit, but there are many other similarities as well as some differences between them.

- ii. **Similarity and Difference Block Format:** In this structure, you say all of the similarities between items A and B and then all of the differences.

Block A (Similarities): *Apples and bananas both grow on trees and have a skin. These two fruits make great snacks. You can also bake them into pies, cakes or breads.*

Block B (Differences): *Apples are round but bananas are long and curved. The flesh of an apple is firm and crunchy whereas a banana is soft and sometimes even mushy. Although you can eat the skin of an apple, you need to peel a banana before you eat it.*

- iii. **Point-by-Point:** In this structure, you explain one point of comparison before moving to the next point. Point-by-Point comparison and contrast uses a separate section or paragraph for each point. For example, Point #1 could be about the similarities and differences of the characters in the book and the movie. In a new section, Point #2 could be about the similarities and differences of the settings.

Point A: Description

Apples grow on trees. They are round and have firm flesh that crunches when you bite into it. You can even eat the skin.

Bananas also grow on trees. But, unlike apples, they are long and curved. The flesh of a banana is soft and sometimes even mushy. Instead of eating the skin, you definitely need to peel a banana!

Point B: Usage

Apples are a really versatile fruit. You can eat them as a snack, bake them into pies, cakes or breads, or even turn them into juice.

Bananas also make a great portable snack. Similar to apples, people bake them into pies or breads.

8. How do I use signal words to identify compare/contrast?

When I am comparing two things, I might use these words:	When I am contrasting two things, I might use these words:
both same like similar similarly the same as also have in common too	differ unlike even though although on the other hand instead however yet but

9. How do I summarise the comparison and contrast statements and make a conclusion? The writer does not restate everything written before. Instead, the writer provides a summary of the main similarity and difference and then concludes with a personal opinion.

Although apples and bananas look different, they are both a great fruit snack that is easy to carry in your school bag. However, if you are not careful you might wind up inventing banana juice!

Session Two: (Finish Explicit Instruction from above) / Modelled Instruction and Guided

Practice (20 min)

1. Provide students with a visual prompt. [butterfly versus bird]
2. Discuss similarities and differences.
3. Brainstorm an interesting lead.
4. Brainstorm ways of organising.
5. Group Write using two structures.

Butterfly	Similarities	Bird
Species: Insect	Alive	Species: Bird
Antennae	Small	Beak
Cocoon	Fly	Nest
Nectar	Hatch from egg	Worms and fruit
	Gardens, forests	
	Wings	

Categories: What they eat / Life cycle /Description

Appendix S: Instructional Rubric Use Lesson Protocol

Objective:

Students will understand how to use the instructional rubric to write an essay comparing and contrasting two things.

Session 1: Participants are shown picture prompt: Car versus Bike. The Group collaboratively brainstorms similarities and differences, discussing different ways to plan, and then co-writes a chart listing ways cars and bikes are the same and different and identifying possible themes to be used in a point-by-point essay format.

Session 2: The Introduction section of the Rubric is introduced. Participants then read a model text introduction and mark it to identify how the Rubric elements were met. After discussing the elements of the Introduction, the Group identified changes in language or format to make the Rubric easier to understand and use. They then independently wrote an Introduction for Car versus Bike using the Rubric.

Session 3: The Main Body section of the Rubric is introduced. Participants then read a model text of several main body paragraphs and mark it to identify how the Rubric elements were met. After discussing the elements of the Main Body, the Group identified changes in language or format to make the Rubric easier to understand and use. They then independently wrote a Main Body paragraph for Car versus Bike using the Rubric.

Session 4: The Conclusion section of the Rubric is introduced. Participants then read a model text Conclusion and mark it to identify how the Rubric elements were met. After discussing the elements of the Conclusion, the Group identified changes in language or format to make the Rubric easier to understand and use. They then independently wrote a Conclusion for Car versus Bike using the Rubric.

Planning to find similarities and differences:

Car	Bike
More expensive	Less expensive
Need large parking/storage space	Need small parking/storage space
A lot of mechanical and electrical parts to break	Some mechanical parts to break
Need petrol or charging	Human energy
Need official license	No license needed
Safety gear	Safety Gear
Go long distances	Short distances
Carry lots of stuff	Carry small things only
Protected from weather	Not protected from weather
Flat tires	Flat tires
Different colours, makes and models	Different colours, makes and models
Four wheels	Two wheels
Seated operation	Need balance
Faster speed	Slower speed

What themes can you see?

	Bike	Car
Appearance	Smaller	Larger
	Two wheels	Four wheels
	Variety of colours, makes and models	Variety of colours, makes and models
	Not protected from weather	Protected from weather
Costs	Need to repair flat tires	Need to repair flat tires
	Learn by yourself or from someone you know even when you are young	Need to take lessons and a test to be a legal, licensed and registered driver after a certain age
	Different price ranges	Expensive to buy
	Can learn how to repair yourself	Mandatory yearly fee to inspect for fitness and make repairs
	No parking or storage costs	Need to pay for parking and storage
	Run by human energy (free)	Need petrol or charging
	Buy helmet, night lights, storage bags, extra	Safety gear is part of car cost
Usage	Slower / short distances	Faster / long distances
	Need balance	Seated operation
	Carry small amount / one or two people	Can transport a lot of large and heavy items / lots of passengers
	Exercise	

MODEL TEXT

The Introduction Paragraph

Bikes and cars are both forms of transportation commonly used by people to get to work, school and fun activities every day. Once you are old enough to drive a car you might think you want to ditch your bike. However, if you carefully consider some of the differences in appearance, cost and use, you might be surprised enough to stick with your trusty bicycle.

Main Body Paragraphs

Although both cars and bicycles are available in a range of prices, cars are the much more expensive option. There are costs that should be considered before choosing a car over a bicycle. One of the costs people forget about is the need to learn how to drive, sit a driving examination and then register as a licensed driver. With a bike you can learn in your driveway as soon as you are able to walk. Also, both cars and bicycles get flat tires or have mechanical difficulties. These can be costly to repair. With a bicycle you may be able to repair a tire as well as do other maintenance yourself. Often a flat tire on a care requires a new tire or professional repair. With a car you also have the cost of a yearly warrant of fitness and many electrical and mechanical parts that can be damaged or fail over time. On the other hand, when you buy a car they throw in the airbags and seat belts and doors. If you get a bike you also need to think about a helmet, lights for night cycling and storage. Another consideration is storage and parking. There is usually a lot of free parking for a bike and not much storage space is required but a car requires more space and most parking comes with a charge. Of course, the key expense for a car is petrol, or, perhaps the cost of electricity. In contrast, a bike requires no more than human energy which can be replenished endlessly.

Although both cars and bicycles come in a variety of colours, makes and models, they are not actually similar in appearance. First, cars are larger and have four wheels. Bicycles are small and have only two wheels. Moreover, one obvious difference is that on a bicycle you are not protected from the weather. It is just you, balanced on a seat between two wheels. If you live in a cold rainy or snowy place you might prefer to be snug inside the shell of a car with the heater humming.

Perhaps the most important thing to consider is how you will use your bike or car. Although you can get from place to place with either a car or a bike, cars are faster and can go for longer distances. It takes a lot more effort and time to go the same distance on a bike. Cars are also great if you have a lot of stuff you need to take from place to place. On a bike it would be hard to carry too much. Cars and bikes also differ in how many people you can transport. Some cars can take more than four or six people but, on a bike, you are limited to yourself and maybe one passenger. Both cars and bikes are similar in that they require some skill, even though you are sitting down. With both you need to look around and be aware of other vehicles and bikes as well as people walking around. You also need to pay attention to road signs and traffic signs and follow the rules. And, on a bike you need something else - balance! Despite all they have in common, only a bike can provide exercise!

The Conclusion Paragraph

Cars and bikes are both convenient forms of transportation. If you don't mind the higher costs of buying, parking and maintaining a car you might like to be able to go fast and far with a carload of friends and heaps of stuff. If, on the other hand, you like the idea of getting some exercise and saving money while also getting to where you need to be, a bike might be the choice for you.

References

- Abraham, G. Y., & Lektor, A. (2013). "Re-inventing" Freire for the 21st Century. *KAPET*, 9(1), 8-17. Retrieved from https://www.researchgate.net/publication/281293479_Re-inventing_Freire_for_the_21st_Century
- Allen, D., & Tanner, K. (2006). Rubrics: Tools for making learning goals and evaluation criteria explicit for both teachers and learners. *CBE Life Sciences Education*, 5(3), 197-203. doi:10.1187/cbe.06-06-0168
- Andrade, H. G. (2000). Using rubrics to promote thinking and learning. *Educational Leadership*, 57(5), 13–18. Retrieved from <http://ezproxy.canterbury.ac.nz/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eue&AN=507688357&site=ehost-live>
- Andrade, H. G. (2001). The effects of instructional rubrics on learning to write. *Current Issues in Education*, 4(4), 1-22. <https://cie.asu.edu/ljs/index.php/cieatasu/article/view/1630/665>
- Andrade, H. G. (2005). Teaching with rubrics: The good, the bad, and the ugly. *College Teaching*, 53(1), 27-30. doi:10.3200/CTCH.53.1.27-31
- Andrade, H., & Boulay, B. (2003). Role of rubric-referenced self-assessment in learning to write. *Journal of Educational Research* 97, 21-30. doi:10.1080/00220670309596625
- Andrade, H., & Du, Y. (2005). Student perspectives on rubric-referenced assessment. *Practical Assessment, Research & Evaluation*, 10(3), 1-11.
- Appanah, T. M., & Hoffman, N. (2014). Using scaffolded self-editing to improve the writing of signing adolescent deaf students. *American Annals of the Deaf*, 159(3), 269-283. doi:10.1353/aad.2014.0024

- Applebee, A. N., & Langer, J. A. (2011). A snapshot of writing instruction in middle schools and high schools. *English Journal*, 100(6), 14-27. Retrieved from <http://search.proquest.com.ezproxy.canterbury.ac.nz/docview/875295901?accountid=14499>
- Archer, A. L., & Hughes, C. A. (2011). *Explicit Instruction: Effective and Efficient Teaching*. New York, NY: Guilford Press.
- Ary, D., Jacobs, L. C., Sorensen, C. K., & Walker, D. A. (2019). *Introduction to Research in Education* (10th Ed.). Boston, MA: Cengage.
- Ayhan, U., & Turkyilmaz, M. U. (2015). Key of language assessment: Rubrics and rubric design. *International Journal of Language and Linguistics*, 2(2), 82-92.
- Barlow, D. H., & Hersen, M. (1984). *Single Case Experimental Designs: Strategies for Studying Behavior Change* (2nd ed.). New York, NY: Pergamon Press.
- Barone, D. (2011). Case study research. In N. K. Duke & M. H. Mallette (Eds.), *Literacy Research Methodologies* (2nd ed., pp. 7-27). New York, NY: Guilford Press.
- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *Qualitative Report*, 13(4), 544-559.
- Bazerman, C. (2009). Genre and cognitive development: Beyond writing to learn. *Pratiques*, 127-138. Retrieved from <https://journals.openedition.org/pratiques/1419>
- Berlach, R. G., & Chambers, D. J. (2011). Interpreting inclusivity: An endeavour of great proportions. *International Journal of Inclusive Education*, 15(5), 529-539. doi:10.1080/13603110903159300
- Berninger, V. W. (1999). Coordinating transcription and text generation in working memory during composing: Automatized and constructive processes. *Learning Disability Quarterly*, 22(2), 99-112. doi:10.2307/1511269 99-112

Berninger, V. W., Garcia, N. P., & Abbott, R. D. (2009). Multiple processes that matter in writing instruction and assessment. In G. A. Troia (Ed.), *Instruction and Assessment for Struggling Writers: Evidence-based Practices* (pp. 15-50). New York: Guilford Press.

Berninger, V. W., & Swanson, H. L. (1994). Modifying Hayes and Flower's model of skilled writing to explain beginning and developing writers. In E. Butterfield (Ed.), *Children's Writing: Toward a Process Theory of Development of Skilled Writing* (pp. 57-81). Greenwich, CT: JAI Press.

Berninger, V. W., & Winn, W. D. (2006). Implications of advancements in brain research and technology for writing development, writing instruction, and educational evolution. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of Writing Research* (pp. 96-114). New York, NY: Guilford Press.

Bharuthram, S. (2015). Lecturers' perceptions: The value of assessment rubrics for informing teaching practice and curriculum review and development. *Africa Education Review*, 12(3), 415-428. doi:10.1080/18146627.2015.1110907

Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education*, 32(3), 347-364. doi:10.1007/BF00138871

Biggs, J. (2003). Aligning teaching for constructing learning. *Higher Education Academy*, 1(4). Retrieved from https://www.researchgate.net/profile/John_Biggs3/publication/255583992_Aligning_Teaching_for_Constructing_Learning/links/5406ffe70cf2bba34c1e8153.pdf

Boon, R. T., Barbutta, P. M., & Paal, M. (2018). The efficacy of graphic organizers on the writing outcomes of students with learning disabilities: A research synthesis of single-case studies. *Learning Disabilities: A Multidisciplinary Journal*, 23(2), 18-33. doi:10.18666/LDMJ-2018-V23-I2-9042

Boud, D., & Falchikov, N. (2006). Aligning assessment with long-term learning. *Assessment and Evaluation in Higher Education*, 31(4), 399-413. doi:10.1080/02602930600679050

Bradford, K. L., Newland, A. C., Rule, A., & Montgomery, S. E. (2016). Rubrics as a tool in writing instruction: Effects on the opinion essays of first and second graders. *Early Childhood Education Journal*, 44(5), 463-472. doi:10.1007/s10643-015-0727-0

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa

Carson, L., & Kavish, D. (2018). Scaffolding rubrics to improve student writing: Preliminary results of using rubrics in a sociology program to enhance learning and mechanical writing skills. *Societies* 8(34), 1-9. doi:10.3390/soc8020034

Center for Advanced Research on Language Acquisition. (2018). *Types of Rubrics*. University of Minnesota. Accessed from http://carla.umn.edu/assessment/vac/improvement/p_5.html

Chen, O., Castro-Alonso, J. C., & Paas, F. (2018). Extending cognitive load theory to incorporate working memory resource depletion: Evidence from the spacing effect. *Educational Psychology Review* 30, 483–501. <https://doi-org.ezproxy.canterbury.ac.nz/10.1007/s10648-017-9426-2>

Chenoweth, N., & Hayes, J. (2003). The inner voice in writing. *Written Communication* 20, 99-118. doi:10.1177/0741088303253572.

Clay, M. M. (1998). *By Different Paths to Common Outcomes*. York, Maine: Stenhouse Publishers.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods in Education* (6th ed.). New York, NY: Routledge.

Cooper, B. S., & Gargan, A. (2009). Rubrics in education, old term, new meanings. *Phi Delta Kappan* 91(1), 54-55.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and Conducting Mixed Methods Research* (2nd ed.). Los Angeles, CA: SAGE.

Creswell, J. W., Plano Clark, V. L., & Garrett, A. L. (2008). Methodological issues in conducting mixed methods research designs. In M. M. Bergman (Ed.), *Advances in Mixed Methods Research* (pp. 66-83). London: Sage. doi:10.4135/9780857024329.d7

Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). Thousand Oaks, CA: SAGE.

De La Paz, S. (2007). Best practice in teaching writing to students with special needs. In S. Graham, C.A. MacArthur & J. Fitzgerald (Eds.), *Best Practices in Writing Instruction* (pp. 308-328). New York, NY: Guilford Press.

De La Paz, S. (2009). Rubrics: Heuristics for developing writing strategies. *Assessment for Effective Intervention*, 34(3), 134-146. doi:10.1177/1534508408318802

De La Paz, S., & Graham, S. (2002). Explicitly teaching strategies, skills, and knowledge: Writing instruction in middle school classrooms. *Journal of Educational Psychology*, 94(4), 687-698. doi:10.1037//0022-0663.94.4.687

De La Paz, S., & McCutchen, D. (2011). Learning to write. In R. E. Mayer and P. A. Alexander (Eds.), *Handbook of Research on Learning and Instruction*, (pp. 32-54). New York, NY: Routledge.

Derewianka, B., & Jones, P. (2012). *Teaching Language in Context*. South Melbourne, Vic: Oxford University Press.

Dexter, D. D., & Hughes, C. A. (2011). Graphic organizers and students with learning disabilities: A meta-analysis. *Learning Disability Quarterly*, 34(1), 51-72. Retrieved from <https://www.jstor.org/stable/23053296>

Dix, S. (2016). Teaching writing: A multilayered participatory scaffolding practice. *Literacy*, 50, 23–31. doi:10.1111/lit.12068.

Eltringham, K., Hawe, E., & Dixon, H. (2018). Checking, highlighting, adding and ticking off: Year 6 students' understandings of and responses to the use of goals in the New Zealand writing classroom. *Education 3-13*, 46(7) 851-866. doi: 10.1080/03004279.2017.1379549

Englert, C. S., Mariage, T. V., & Dunsmore, K. (2006). Tenets of sociocultural theory in writing instruction research. In C.A. MacArthur, S. Graham and J. Fitzgerald (Eds.), *Handbook of Writing Research* (pp. 208-221). New York, NY: The Guilford Press.

Englert, C. S., Okolo, C. M., & Mariage, T. V. (2009). Information writing across the curriculum. In G. A. Troia (Ed.), *Instruction and Assessment for Struggling Writers: Evidence-based Practices* (pp. 132-161). New York, NY: The Guilford Press.

Englert, C. S., Raphael, T. E., Anderson, L. M., Anthony, H. M., & Stevens, D. D. (1991). Making strategies and self-talk visible: Writing instruction in regular and special education classrooms. *American Educational Research Journal*, 28(2), 337-372. doi:10.2307/1162944

Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly*, 26(2), 43-71. doi:10.1002/piq.21143

Freire, P. (1996). *Pedagogy of the Oppressed*. (Rev. Ed.). London, UK: Penguin
Gillespie, A., & Graham, S. (2014). A meta-analysis of writing interventions for students with learning disabilities. *Exceptional Children*, 80(4), 454-473. doi:10.1177/0014402914527238

Goodrich, H. (1996). Understanding rubrics. *Educational Leadership*, 54(4), 14.

Gordon, M. (2009). The misuses and effective uses of constructivist teaching. *Teachers and Teaching: Theory and Practice*, 15(6), 737-746. doi:10.1080/13540600903357058

Graham, S., Capizzi, A., Harris, K. R., Hebert, M., & Morphy, P. (2013). Teaching writing to middle school students: a national survey. *Read Writ*, 27, 1015-1042. doi:10.1007/s11145-013-9495-7

Graham, S., Collins, A. A., & Rigby-Wills, H. (2017). Writing characteristics of students with learning disabilities and their typically achieving peers: A Meta-Analysis. *Exceptional Children*, 83(2), 199-218. doi 10.1177/0014402916664070

Graham, S., & Harris, K. R. (2018). An examination of the design principles underlying a self-regulated strategy development study. *Journal of Writing Research* 10(2), 139-187. doi:10.17239/jowr-2018.10.01.02

Graham, S., MacArthur, C. A., & Fitzgerald, J. (2007). *Best Practices in Writing Instruction*. New York, NY: Guilford Press.

Graham, S., Olinghouse, N. G., & Harris, K. R., (2009). Teaching composing to students with learning disabilities: Scientifically supported recommendations. In G. A. Troia, (Ed.), *Instruction and Assessment for Struggling Writers: Evidence-Based Practices* (pp. 165-186). New York, NY: The Guilford Press.

Graham, S., & Sandmel, K. (2011). The process writing approach: A meta-analysis. *The Journal of Educational Research*, 104(6), 396-407. doi:10.1080/00220671.2010.488703

Green, S. K., & Gredler, M. E. (2002). A review and analysis of constructivism for school-based practice. *School Psychology Review*, 31(1), 53. Retrieved from <http://ezproxy.canterbury.ac.nz/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=6587103&site=ehost-live>

Greenberg, K. P. (2015). Rubric use in formative assessment: A detailed behavioural rubric helps students improve their scientific writing skills. *Teaching of Psychology* 42(3), 211-217. doi: 10.1177/0098628315587618

Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11(3), 255–274.
<https://doi.org/10.3102/01623737011003255>

Gresham, F. M., MacMillan, D. L., Beebe-Frankenberger, M. E., & Bocian, K. M. (2000) Treatment integrity in learning disabilities intervention research: Do we really know how treatments are implemented? *Learning Disabilities Research & Practice*, 15(4), 198-205, doi: 10.1207/SLDRP1504_4

Hammann, L. A., & Stevens, R. J. (2003). Instructional approaches to improving students' writing of compare-contrast essays: An experimental study. *Journal of Literacy Research*, 35(2), 731-756.

Hamp-Lyons, L., & Henning, G. (1991). Communicative writing profiles: An investigation of the transferability of a multiple-trait scoring instrument across ESL writing assessment contexts. *Language Learning*, 41(3), 337-373. doi:10.1111/j.1467-1770.1991.tb00610.x

Harris, K. R., & Graham, S. (2009). Self-regulated strategy development in writing: Premises, evolution, and the future. *British Journal of Education Psychology (monograph series)*, 6, 113-135. doi:10.1348/978185409X422542

Harris, K. R., & Graham, S. (2013). “An adjective is a word hanging down from a noun”: Learning to write and students with learning disabilities. *Annals of Dyslexia*, 63(1), 65-79. doi:10.1007/s11881-011-0057-x

Hayes, J. R., & Berninger, V. W. (2014). Cognitive processes in writing: A framework. In Aarfe, B., Dockrell, J., & Berninger, V. (Eds.), *Writing Development in Children with Hearing Loss, Dyslexia, or Oral Language Problems: Implications for Assessment and Instruction* (Chapter 1). Retrieved from

https://www.researchgate.net/publication/288669424_Cognitive_processes_in_writing_a_framework#fullTextFileContent

Hayes, J. R., & Flower, L. S. (1980). Identifying the organization of writing processes. In: L. W. Gregg & E. R. Steinberg (Eds.), *Cognitive Processes in Writing* (pp. 3-30). Hillsdale, NJ: Erlbaum.

Hayes, J. R., & Flower, L. S. (1986). Writing research and the writer. *American Psychologist*, 41(1), 1106-1113. doi:10.1037/0003-066X.41.10.1106

Hebert, M., Bohaty, J. J., Nelson, J. R., & Roehling, J. V. (2018). Writing informational text using provided information and text structures: an intervention for upper elementary struggling writers. *Read Writ* 31, 2165-2190. <https://doi.org/10.1007/s11145-018-9841-x>

Helfrich, S. R., & Clark, S. K. (2016). A comparative examination of pre-service teacher self-efficacy related to literacy instruction. *Reading Psychology*, 37(7), 943-961. <https://doi.org.ezproxy.canterbury.ac.nz/10.1080/02702711.2015.1133466>

Hodges, T. S., Feng, L., Kuo, L., & McTigue, E. (2016). Discovering the literacy gap: A systematic review of reading and writing theories in research. *Cogent Education*, 3(1), 1-13. doi:10.1080/2331186X.2016.1228284

Hughes, C. A., Morries, J. R., Therrien, W. J., & Benson, S. K. (2017). Explicit instruction: Historical and contemporary contexts. *Learning Disabilities Research & Practice*, 32(3), 140-148. doi:10.1111/ldrp.12142

Hyland, K. (2008). Writing theories and Pedagogies. *Indonesian Journal of English Language Teaching* 4(2), 91-110. Retrieved from https://www.researchgate.net/publication/288842506_Writing_theories_and_writing_pedagogies/download

Ivanic, R. (2004). Discourse of writing and learning to write. *Language and Education*, 18(3), 220-226. doi:10.1080/09500780408666877

Jones (2014). From ideas in the head to words on the page: young adolescents' reflections on their own writing processes. *Language and Education* 28(1), 52-67.doi:10.1080/09009500782.2013.763820

Juel, C. (1988). Learning to read and write: A longitudinal study of 54 children from first through fourth grades. *Journal of Educational Psychology*, 80(4), 437-447. doi:10.1037/0022-0663.80.4.437 437-447

Juel C., Griffith, P. L., & Gough, P. B. (1986). Acquisition of literacy: A longitudinal study of children in first and second grade. *Journal of Educational Psychology*, 78(4), 243-255. doi:10.1037/0022-0663.78.4.243

Kalyuga, S. (2010). Schema acquisition and sources of cognitive load. In J. L. Plass, R. Moreno, R. Brunken, R. (Eds.), *Cognitive Load Theory* (pp. 48-64). New York, NY: Cambridge University Press.

Kazdin, A. E. (2011). *Single-case Research Designs: Methods for Clinical and Applied Settings* (2nd ed.). New York, NY: Oxford University Press.

Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist*, 41(2), 75-86. doi: 10.1207/s15326985ep4102_1

Kivunja, C., & Kuyini, A. B. (2017). Understanding and applying research paradigms in educational contexts. *International Journal of Higher Education*, 6(5), 26-41. Retrieved from <http://www.sciedu.ca/journal/index.php/ijhe/article/view/12169/7683>.

- Kratochwill, T. R., Hitchcock, J. H., Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M., & Shadish, W. R. (2013). Single-case intervention research design standards. *Remedial and Special Education*, 34(1), 26–38. <https://doi.org/10.1177/0741932512452794>
- Kucer, S. B. (2009). *Dimensions of Literacy*. New York, NY: Routledge.
- Kucera, J., & Axelrod, S. (1995). Multiple-baseline designs. In S. McCormick, & S. B. Neuman (Eds.), *Single-subject Experimental Designs: Applications to Literacy Research* (pp: 84-103). Newark, DE: International Reading Association
- Li, J., & Lindsey, P. (2015). Understanding variations between student and teacher application of rubrics. *Assessing Writing*, 26, 67-79. doi:10.1016/j.asw.2015.07.003
- Lloyd-Jones, R. (1977). Primary trait scoring. In C. R. Cooper & L. Odell (Eds.), *Evaluating Writing: Describing, Measuring, Judging* (pp. 33-66). National Council of Teachers of English. Accessed at <https://files.eric.ed.gov/fulltext/ED143020.pdf#page=43>
- Logan, K., & Mountain, L. (2018). Writing instruction in chemistry classes: Developing prompts and rubrics. *Journal of Chemical Education*, 95(10), 1692-1700. doi:10.1021/acs.jchemed.8b00294
- Macarthur, C. A., & Philippakos, Z. (2010). Instruction in a strategy for compare-contrast writing. *Council for Exceptional Children*, 76(4), 438-456.
- Martin, N. D., Tissenbaum, C. D., Gnesdilow, D., & Puntambekar, S. (2018). Fading distributed scaffolds: the importance of complementarity between teacher and material scaffolds. *Instructional Science* 47(1), 69-98. doi:10.1007/s11251-018-9474-0
- Martone, A., & Sireci, S. G. (2009). Evaluating alignment between curriculum, assessment, and instruction. *Review of Educational Research*, 79(4), 1332-1361. doi:10.3102/0034654309341375

McCutchen, D. (1996). A capacity theory of writing: Working memory in composition. *Educational Psychology Review*, 8(3), 299–325. Retrieved from <https://doi-org.ezproxy.canterbury.ac.nz/10.1007/BF01464076>

McCutchen, D. (2006). Cognitive factors in the development of children's writing. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of Writing Research* (pp. 115-130). New York, NY: Guilford Press.

Merriam, S. B. (1988). *The Jossey-Bass Education Series, The Jossey-Bass Higher Education Series and The Jossey-Bass Social and Behavioral Science Series. Case Study Research in Education: A Qualitative Approach*. San Francisco, CA: Jossey-Bass.

Ministry of Education (n.d.a) *Accelerating Writing Progress in Years 7 and 8*.

Ministry of Education (n.d.b). *e-asTTle*. Te Kete Ipurangi. Wellington: New Zealand Government. Accessed from <https://e-asrtle.tki.org.nz/>

Ministry of Education (2007). *The New Zealand Curriculum*. Te Kete Ipurangi. Wellington: Learning Media.

Ministry of Education (2010a). *Literacy Online: The Literacy Learning Progressions*. Te Kete Ipurangi. Wellington: New Zealand Government. Accessed from <https://literacyprogressions.tki.org.nz/>

Ministry of Education. (2010b). *Reading and Writing Standards for Years 1-8*. Wellington: Learning Media.

Ministry of Education (2013). *New Zealand Schools (Ngā Kura o Aotearoa): A Report on the Compulsory Schools Sector in New Zealand*. Accessed from https://www.parliament.nz/resource/mi-nz/51DBHOH_PAP59235_1/69cc6e800773e183f11fe7d6e89f8527a425f0c3

Ministry of Education (2020). *Writing/Tuhituhi: Primary Schooling*. Accessed from <https://www.educationcounts.govt.nz/statistics/indicators/main/education-and-learning-outcomes/writing-tuhituhi-primary-schooling>

Moreno, R., & Park, B. (2010). Cognitive load theory: Historical development and relation to other theories. In J. L. Plass, R, Moreno, & R. Brunken (Eds.), *Cognitive Load Theory* (pp. 9-28). New York, NY: Cambridge University Press.

Murphy, R. J., & Bryan, A. J. (1980). Multiple-baseline and multiple-probe designs: Practical alternatives for special education assessment and evaluation. *The Journal of Special Education*, 14(3), 325–335. <https://doi.org/10.1177/002246698001400306>

O'Neill, S., Geoghegan, D., & Petersen, S. (2013). Raising the pedagogical bar: Teachers' co-construction of explicit teaching. *Improving Schools*, 16(2), 148-158. doi:10.1177/1365480213493709

Onwuegbuzie, A. J., & Collins, K. M. (2007). A typology of mixed methods sampling designs in social science research. *The Qualitative Report*, 12(2), 281-316. Retrieved from <https://nsuworks.nova.edu/tqr/vol12/iss2/9>

Onwuegbuzie, A. J., Johnson, R. B., & Collins, K. M. T. (2011). Assessing legitimization in mixed research: A new framework. *Quality & Quantity*, 45(6), 1253-1271. doi:10.1007/s11135-009-9289-9

Onwuegbuzie, A. J., & Johnson, R. B. (2006). Types of legitimization (validity) in mixed methods research. *Research in the Schools*, 13(1), 48-63.

Onwuegbuzie, A. J., & Teddlie, C. (2003). In A. Tashakkori and C. Teddlie (Eds.), *Handbook of Mixed Methods in Social and Behavioral Research* (pp. 351-383). Thousand Oaks, CA: Sage Publications.

Parr, J., & Jesson, R. (2016). Mapping the landscape of writing instruction in New Zealand primary school classrooms. *Reading and Writing*, 29. doi:10.1007/s11145-015-9589-5.

Parsonson, S. B., & Baer, M. D. (1986). The Graphic Analysis of Data. 10.1007/978-1-4684-8786-2_8.

Perin, D. (2007). Best practices in teaching writing to adolescents. In S. Graham, C. A. MacArthur, & J. Fitzgerald (Eds.), *Best Practices in Writing Instruction* (pp. 242-264). New York, NY: The Guilford Press.

Pritchard, R. J., & Honeycutt, R. L. (2006). The Process approach to writing instruction. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of Writing Research* (pp. 275-290). New York, NY: Guilford Press.

Puntambekar, S., & Hübscher, R. (2005). Tools for scaffolding students in a complex learning environment: What have we gained and what have we missed? *Educational Psychologist*, 40(1), 1-12. doi:10.1207/s15326985ep4001_1

Ramrathan, L., le Grange, L., & Shawa, L. B. (2017). Ethics in educational research. In L. Ramrathan, L. le Grange & P. Higgs (Eds.), *Education Studies for Initial Teacher Education* (pp. 432-443). Retrieved from https://www.researchgate.net/publication/312069857_Ethics_in_educational_research

Raphael, T. E., & Kirschner, B. M. (1985). *The Effects of Instruction in Compare/Contrast Text Structure on Sixth-Grade Students' Reading Comprehension and Writing Products*. *Research Series* No. 161. Michigan State University. Accessed at <https://files.eric.ed.gov/fulltext/ED264537.pdf>

Ray, A. B., Graham, S., Houston, J. D., & Harris, K. R. (2016). Teachers use of writing to support students' learning in middle school: A national survey in the United States. *Read Writ* 29, 1039–1068 (2016). <https://doi.org/10.1007/s11145-015-9602-z>

- Riley-Tillman, T. C., & Burns, M. K. (2009). Visual Analysis and Interpretation Strategies for Single-Case Design. In *Evaluating Educational Interventions: Single-Case Design for Measuring Response to Intervention* (pp. 72-105). New York, NY: The Guilford Press.
- Rose, D. (2011). Beyond literacy: Building an integrated pedagogic genre. *Australian Journal of Language and Literacy* 34(1), 81-97.
- Rose, D., & Martin, J. R. (2012). *Learning to Write, Reading to Learn: Genre, Knowledge and Pedagogy in the Sydney School*. Sheffield: Equinox Publishing.
- Sammons, P. (2010). The contribution of mixed methods to recent research on educational effectiveness. In Tashakkori, A., & Teddlie, C. (Eds.), *SAGE Handbook of Mixed Methods in Social & Behavioral Research* (pp. 697-724). Thousand Oaks, CA: SAGE.
- Santangelo, T. S., Harris, K. R., & Graham, S. (2007). Self-Regulated Strategy Development: A validated model to support students who struggle with writing. *Learning Disabilities -- A Contemporary Journal*, 5(1), 1–20. Retrieved from <http://ezproxy.canterbury.ac.nz/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eue&AN=24314987&site=ehost-live>
- Santangelo, T., & Olinghouse, N. (2009). Effective writing instruction for students who have writing difficulties. *Focus on Exceptional Children*, 42, 1-20. doi:10.17161/fec.v42i4.6903.
- Scardamalia, M., & Bereiter, C. (1986a). Writing. In R. F. Dillon and R. J. Sternberg (Eds.), *Cognition and Instruction* (pp. 59-81). Orlando, FL: Academic Press.
- Scardamalia, M. & Bereiter, C. (1986b). Research on written composition. In M. C. Wittrock (Ed.), *Handbook on Research on Teaching* (pp. 778-803). New York, NY: Macmillan.
- Schunk, D. H. (2012). *Learning Theories: An Educational Perspective* (6th ed.). Boston, MA: Pearson.

Scott, C. S. (2012). Learning to write. In A. G. Kamhi & H. W. Catts, *Language and Reading Disabilities*, (3d ed.), (pp. 244-268). Boston, NY: Pearson.

Smagorinsky, P. (2011) *Vygotsky and Literacy Research: A Methodological Framework*. Rotterdam, The Netherlands: Sense Publishers.

Smagorinsky, P. (2018). Is instructional scaffolding actually Vygotskian, and why should it matter to literacy teachers? *Journal of Adolescent & Adult Literacy*, 62(3), 253-257. doi:10.1002/jaal.756

Smit, J., van Eerde, H. A. A., & Bakker, A. (2013). A conceptualisation of whole-class scaffolding. *British Educational Research Journal*, 39(5), 817-834. doi:10.1002/berj.3007

Stone, C. A. (1998). The metaphor of scaffolding: Its utility for the field of learning disabilities. *Journal of Learning Disabilities*, 31(4), 344-364. doi:10.1177/002221949803100404

Sundeen, T. H. (2013). Instructional rubrics: Effects of presentation options on writing quality. *Assessing Writing*, 21, 74-88. <http://dx.doi.org/10.1016/j.asw.2014.03.003>

Sweller, S. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12, 257-285. doi:epdf/10.1207/s15516709cog1202_4

Sweller, J. (2010). Element interactivity and intrinsic, extraneous, and germane cognitive load. *Educational Psychology Review*, 22(2), 123-138. doi:10.1007/s10648-010-9128-5

Sweller, J., van Merriënboer, J. J. G., & Paas, F. (2019). *Cognitive architecture and instructional design: 20 Years later*. New York, NY: Springer. doi:10.1007/s10648-019-09465-5

Tashakkori, A., & Teddlie, C. (2010). *Sage Handbook of Mixed Methods in Social & Behavioral Research* (2nd ed.). Los Angeles: SAGE Publications.

Thompson, I. (2013). The mediation of learning in the Zone of Proximal Development through a co-constructed writing activity. *Research in the Teaching of English*, 47(3), 247-276. Retrieved

from https://www-jstor-org.ezproxy.canterbury.ac.nz/stable/24397856?pq-origsite=summon&seq=1#metadata_info_tab_contents

Torrance, M., Fidalgo, R., & Robledo, P. (2015). Do sixth-grade writers need process strategies? *British Journal of Educational Psychology, 85*, 91-112. doi:10.1111/bjep.12065

Troia, G. A. (2006). Writing instruction for students with learning disabilities. In C.A. MacArthur, S. Graham and J. Fitzgerald (Eds.), *Handbook of Writing Research* (pp. 324-336). New York, NY: The Guilford Press.

Troia, G. A., & Graham, S. (2002). The effectiveness of a highly explicit, teacher-directed strategy instruction routine: Changing the writing performance of students with learning disabilities. *Journal of Learning Disabilities, 35*, 290-305.

Turgut, F., & Kayaoglu, M. N. (2015). Using rubrics as an instructional tool in EFL writing courses. *Journal of Language and Linguistic Studies 11(1)*, 47-58.

Van Merriënboer, J. J. G., Kirschner, P. A., & Kester, L. (2003). Taking the load off a learner's mind: Instructional design for complex learning. *Educational Psychologist, 38(1)*. 5-13. doi:10.1207/S1532698EP3801_2

Vygotsky, L.S. (1978). *Mind and Society: The Development of Higher Mental Processes*. Cambridge, MA: Harvard University Press.

Vygotskii, L. S., & Kozulin, A. (1986). *Thought and Language* (Translation newly rev. and ed.). Cambridge, Mass: MIT Press.

Watson, S., Michalek, A., & Gable, R. (2016). Linking Executive Functions and Written Language: Intervention for Students with Language Learning Disorders. *International Journal of School and Cognitive Psychology, 3*. doi:10.4172/2469-9837.1000178

Wertsch, J. V. (1979). From social interaction to higher psychological processes: A clarification and application of Vygotsky's theory. *Human Development*, 22, 1-22. Retrieved from <https://www.jstor.org/stable/26763969>

Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 17(2), 89-100. doi:10.1111/j.1469-7610.1976.tb00381.x

Yilmaz, K. (2008). Constructivism: Its theoretical underpinnings, variations, and implications for classroom instruction. *Educational Horizons*, 86(3), 161-172. Retrieved from <https://www.jstor.org/stable/42923724>