

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

Peer and Self- Assessment in Written Language: Strategies for Motivation and Achievement

A thesis presented in partial fulfillment of
the requirements for the degree of
MASTER OF EDUCATION
at Massey University, Palmerston North campus
New Zealand.

Darcy Ann Wilson

November 2007

Abstract

This study explores the effectiveness of the formative assessment structures, specifically peer and self- assessment strategies, on student achievement and motivation within a written language context. Although the literature reports on the effectiveness of these strategies, its practical application, its impact on the teaching / learning process, and its affects on the learners was a consideration for this 'chalk face' practitioner.

The 26 participants, a diverse group of learners, were volunteers from a Year 5 / 6 composite class at a decile one school in New Zealand. They completed a questionnaire at both the start and finish of this project that queried perceptions about literacy and motivation, trialled a variety of peer and self- assessment strategies in practical classroom writing situations, and were involved in various unstructured interviews, discussions, and observations. Using action research, a practical research methodology undertaken as part of the classroom programme, allowed the integration of theory and practice so the routines of the classroom programmes remained relatively unchanged while changes to the teaching / learning process were tested.

The pre-dominantly qualitative data was collected, correlated, and analysed from an interpretative approach so recurring themes, key ideas, and unexpected or unusual findings were identified. The major finds were:

- Participants' achievement levels and motivation to learn increased when using formative assessment / assessment for learning / assessment to learn structures and principles.

- Peer interactions and support, and co-constructing a shared understanding of what is required and how it can be achieved, enhances learning by developing assessment skills, higher levels of engagement in work, and direction for present and next-step learning.
- Different peer and self- assessment strategies are more appropriate than others depending on the literacy skills of the learner.

This project has implications for teaching practice but due to its highly contextualised nature and action research methodology, results cannot be generalised. However, teachers can adapt and employ factors they feel are suitable for their own situations especially as improving student achievement is a goal of teaching and, in this research, improving student achievement was attained by using peer and self-assessment strategies.

Acknowledgements

- Duncan – Thank you so much for all the love and support and encouragement and fabulous meals! You've helped push me to achieve this dream (nightmare?!) even when I've pushed back. What would you do without me?!!
- The administration, staff, and Board of Trustees at my school – None of this could have happened without your support.... thank you. An extra big thank you to Chris, Frannie, Rex, Jacki, and Tracy... what a team!
- To my wonderful and patient supervisors – Thank you Alison and Nick for all of your encouragement and good humour. Nick, I will always see you as a Mercedes and Alison, something less flashy than a Ferrari!
- To my family and friends both far and near – Encouraging me from across the Pacific and from across town (though I'm still not sure you'll get me into a skirt for graduation!) – thank you.
- To my class of 2006 – Thank you for participating and providing your insights into making my teaching practices better for you and future learners.
- To my class of 2007 – Thank you for your patience as I struggled to complete this 'really long story'!

Table of Contents

Abstract	i
Acknowledgements	iii
Table of Contents	iv
List of Tables and Graphs	vii
List of Appendices	viii

Chapter One – Overview

Introduction	1
Demographic Information	1
Background	3
Purpose of Study	6
Research Questions	7
Definitions	7
Assessment	8
Formative Assessment / Assessment for Learning / Assessment to Learn (AtoL)	9
Peer and Self- Assessment	10
Motivation	11
Summary and Chapter Outlines	12

Chapter Two – Literature Review

Introduction	15
Learning	15
Motivation	17

Motivation to Learn -----	17
Intrinsic / Extrinsic Motivation -----	25
Formative Assessment -----	27
Learning Intentions and Success Criteria -----	29
Peer and Self- Assessment -----	32
Feedback to Next-Step Learning -----	34
Each Learner Can Improve -----	37
Written Language -----	39
Summary -----	41

Chapter Three – Underpinnings of the Research

Introduction -----	43
Theoretical Framework of the Research -----	43
Trialled Peer and Self- Assessment Strategies -----	47
Data Collection Methods -----	50
Data Analysis Procedures -----	55
Ethical Considerations -----	59
Summary -----	63

Chapter Four – Data Analysis

Introduction -----	64
Data Analysis -----	64
Summary -----	86

Chapter Five – Discussion

Introduction ----- 87

Research Questions & Discussions ----- 87

Summary ----- 112

Chapter Six – Implications of this Research

Introduction ----- 113

Summary of the Research Findings ----- 113

Implications for Practice ----- 115

Limitations of the Research ----- 117

Implications for Further Research ----- 119

Summary ----- 120

Appendices ----- 122

References ----- 139

List of Tables

Table 1.1 - Demographics of participants ----- 2

Table 4.1a – Questionnaire - Attitudinal scale responses – Ability ----- 65

Table 4.1b - Questionnaire - Attitudinal scale responses – Enjoyment ----- 66

Table 4.1c - Questionnaire - Attitudinal scale responses – Influence ----- 68

Table 4.1d - Questionnaire - Attitudinal scale responses – Connections -- 70

Table 4.2 – Questionnaire – Ordering / Ranking ----- 71

Table 4.3 – Questionnaire – Opposing Pairs ----- 74

List of Graphs

Graph 4.1 – Traffic Lights – Enjoyment and Improvement ----- 76

Graph 4.2 – Thumbs – Enjoyment and Improvement ----- 77

Graph 4.3 – Exemplars Next Step – Enjoyment and Improvement ----- 78

Graph 4.4 – How Well – Enjoyment and Improvement ----- 79

Graph 4.5 – How Well Plus – Enjoyment and Improvement ----- 80

List of Appendices

Appendix 1 – MUHEC Approval Form ----- 122

Appendix 2 – Information Sheet – Adult ----- 123

Appendix 3 – Information Sheet – Child ----- 125

Appendix 4 – Consent Form – Adult ----- 127

Appendix 5 – Consent Form – Child ----- 128

Appendix 6 – Exemplar Matrices in ‘kid speak’ ----- 129

Appendix 7 – How Well ----- 132

Appendix 8 – How Well Plus ----- 133

Appendix 9 – Questionnaire ----- 134

Appendix 10 – Strategy Evaluation Form ----- 138

Chapter 1 – Overview

Introduction

This thesis explores how the use of formative assessment strategies affects teaching practice and student learning in written language. The intentions are to improve student achievement and motivation using a variety of peer and self- assessment strategies to guide students' developing self-management of their learning, and to improve my teaching practice and professional knowledge.

This chapter will provide demographic information about the worksite and participants, background information to explain how this study came to be, the purposes of the study, the research questions that structure this whole project, definitions of the main themes explored within this report, and the framework or structure of this report.

Demographic Information

School

This research project was carried out in an urban contributing school in the central North Island of New Zealand in 2006. It is a decile one school with the majority of students coming from the lowest socio-economic strata. There are mainly single-parent families often with extended family members living together. When this research began, the school had approximately 200 students ranging from new entrant (5 year olds) to Year 6 (11 / 12 year olds) with an ethnic composition that is predominantly Maori. There are eight classroom teachers, mostly with composite classes, and a special needs satellite classroom.

Participants

The participants of this research are the students from my Year 5 / 6 composite class who, with their parents' / caregivers' consent, agreed to participate. Four of the 30 students (all Year 6 Maori girls) elected not to be involved. Their identities were kept anonymous while their data, as that of the transient students, was not included in the report. Both participants and non-participants received the same instruction, work, and exercise books so there was no indication of who was or was not participating in the study. No participant withdrew from the study once it began.

Following is a breakdown of demographic information of the 26 Year 5 / 6 participants:

Table 1.1 – Demographic information

	Maori		NZ European / Pakeha		Pasifika		Asian	
Ethnicity	46.2% (12)		34.6% (9)		11.5% (3)		7.7% (2)	
Gender	41.7% (5)	58.3% (7)	55.6% (5)	44.4% (4)	66.7% (2)	33.3% (1)	100% (2)	-
Age range (as at 1.1.06)	9.0 – 10.8	8.9 – 10.3	8.8 – 10.4	8.9 – 10.0	9.1 – 9.11	10.2	8.11 – 9.7	-
Special Needs (Academic)	37.5% (3)	25.0% (2)	12.5% (1)	12.5% (1)	-	-	12.5% (1)	-
Special Needs (Behavioural)	33.3% (2)	16.7% (1)	33.3% (2)	16.7% (1)	-	-	-	-

(Shaded areas represent males, non-shaded areas represent females.)

Students identified as having academic special needs are two years or more below their age equivalent in literacy. They are dual enrolments with the Correspondence School, receive teacher aide assistance in literacy support programmes, and have adapted in-class work. Those with behavioural special needs have social, or self-

management and study skill difficulties, or both. They are receiving support from the Resource Teachers of Learning and Behaviour (RTLB), some outside agencies, in-school support programmes, and some are on pharmaceutical interventions. Three students are classified in both the academic and behavioural special needs.

Background

This thesis evolved from professional development instigated at my school in 2005. As a staff, we examined and trialled various peer and self- assessment strategies as a process to develop students' self-management of their learning and achievement. With positive outcomes indicated from our limited trials, I decided to take another step in the use of formative assessment.

My choice of written language as the curricular focus was twofold. Firstly, I identified written language as an area of general weakness within my class. Discussions with my colleagues indicated that this weakness was evident throughout the varying class levels and was of a growing concern among the staff. Secondly, I wanted to find ways to improve my teaching of written language to ensure that my students, present and future, get the best educational opportunities possible. This research provided practical opportunities to develop both skills and knowledge for both my students and myself.

I have always believed that students should take an active role in their learning yet teaching styles have not always mirrored my beliefs. Over the years, education professionals have promoted various teaching methods which have resulted in

varying degrees of success. The present trend of using formative assessment procedures to improve learning supports my beliefs.

Formative assessment, as stated by Black and Wiliam (1998), is an ongoing monitoring process to promote student learning. It provides both the educator and the students with information about the students' learning during the learning task while providing details for next-step learning. An important aspect of formative assessment is that it provides the students with structures to self-manage their own learning. As a result, students are given the opportunity to take a more active role in their learning with support and guidance provided by the teacher and their peers.

By applying formative assessment structures within a written language context, I am providing the students with the opportunity to manage their own learning and achievement, develop their skills in written language, and increase their self-esteem by becoming independent and life-long learners. Brophy (1998) states that students adopting these structures, such as goal setting and goal commitment, informative feedback, and effort-outcome linkages, will enhance their motivation and confidence to learn.

For me, it is also an opportunity to learn new strategies for teaching written language to a diverse group of learners. Peer and self- assessment strategies that prove to be successful for my present students can be adopted in my future classes while those that were less successful can either be adapted or another strategy trialled. It is also a chance for further professional development that will allow me to take a leading role in developing and promoting the use of formative assessment strategies at my

school. With the sharing of the outcomes of this research, I can support my colleagues in trying different peer and self- assessment strategies within their own classrooms to see which will enhance the learning of their students.

Sutton (1995) considers the interconnection between planning and assessment in the learning cycle to be paramount in the teaching process. That it is a cyclical pattern and not linear is another key factor. Clarke (2003) recommends that learning intentions be established at the planning stage to ensure assessment is explicitly connected to what is meant to be learnt. This process will help minimise if not eliminate a paradox in the teaching / learning process that occurs when the students' perceptions do not directly match the teacher's intentions (Ramsden, 1992). Each student approaches learning tasks based on previous experiences and expectations. As teachers, no matter how well we know our students, these past experiences and expectations are unknown factors yet they are major influences on student motivation, learning, and achievement. Thus, students respond to a situation as they perceive it, not necessarily as the teacher intends or anticipates.

Following on from or prior to the teaching and learning task is the assessment of what has been previously learned by the students. From these assessments, teachers see how well the students have learned what was taught and provides the basis for planning future lessons. However, as noted earlier, the paradox of teaching indirectly suggests that the assessment may not be an accurate measure of what the students truly understand or what the teacher is trying to teach. It is through the use of ongoing formative assessment and teacher's self-reflections that these inconsistencies can be considered and improvements made.

It is through peer and self assessment, a type of formative assessment, which I am hoping to alleviate some of this potential misunderstanding and miscommunication in the teaching / learning paradox documented by Ramsden (1992). Peer and self-assessment procedures use formative assessment structures such as learning intentions, success criteria, judgements made against the success criteria, feedback and feed forward by self, peers, and teachers, and also provide next-step learning (or planning in the case of the teacher.) Being more specific and direct with the intention and identifying explicit criteria for achieving success within the learning task, students can be more focused on what they are to be doing with fewer chances of misunderstanding the requirements for success.

Purpose of the study

Feeling that I had taken only a few small steps in 2005 in regards to learning about and utilising peer and self- assessment strategies within my class, I believed they provided great potential for improving students' learning. However, by the end of that year, I was both frustrated and excited about the whole process. It is from this conflicted state of mind that this thesis research emerged as there remained a lot of unanswered questions but also an enthusiasm to continue and to develop peer and self- assessment within my class. I wanted to develop students' skills and self-confidence in self-managing their own learning and believed that peer and self-assessment could support and assist in achieving that goal. I also wanted to develop my own teaching knowledge and practises to improve the potential for student learning and achievement.

Research Questions

Having established the purpose of this particular study and encouraged by my colleagues and school leaders, my thesis revolves around the following question.

In written language, what effects do using the formative assessment structures of peer and self- assessment have on the motivation and achievement of learners?

This question acts as an umbrella to the following sub-questions:

- Which strategies are effective in developing peer and self- assessment skills within this class?
- Which peer and self- assessment strategies are effective in raising student achievement in written language?
- How do different peer and self- assessment strategies affect the motivation and achievement of non-motivated, underachieving learners compared to motivated, achieving learners?
- How effective are the Ministry of Education exemplars in meeting the various learning needs within my primary classroom?

Definitions

Before continuing, definitions of the concepts which form the basis of this research are required. This shared understanding will move to alleviate any misunderstandings or misconceptions. It also needs to be stated that all the concepts that relate to teaching and learning process are based on a primary classroom situation as opposed to other learning environments.

Assessment

Overall and Sangster (2006) consider assessment a process where data is collected, analysed, and the results reported to somebody and then utilised. Conversely, the results can be used immediately. In education, assessment has many functions and many layers that include the comment made by the teacher to help a student progress, to the formal setting of an examination. Overall and Sangster contend that assessment is closely aligned to accountability which in itself is a multi-layered concept.

Ysseldyke (2001) maintains that assessment is a multi-faceted process that is used throughout society. Within the education sector, the teacher collects data to make decisions about their students. There are numerous ways to assess students' work though some are more effective in promoting learning than others.

Assessment can be separated into two styles based on the purpose of the assessment. Summative assessment, as its name would suggest, is done at the end of the learning process where it judges the success of the process as a 'summing' up. Airasian (1996: 82) defines summative assessments as:

“... those used to evaluate the outcomes of instruction and take the form of tests, projects, term papers, and final exams.”

In contrast, formative assessment is done during the learning process and is used to 'inform' the learner and teacher of the learning that is happening (or not happening). Airasian (1996: 82) defines formative assessments as “...those used to alter or improve instruction while it is still going on.”

In using peer and self-assessment strategies, this research focuses on the formative assessment process.

Formative Assessment / Assessment for Learning /

Assessment to Learn (AtoL)

As a general overview to formative assessment / assessment for learning is any assessment that prioritises the promotion of student learning as its main concern (Black & Wiliam, 1998). Weber (1999) develops this idea further by considering formative assessment in two ways. Firstly, as an assessment process utilised throughout the unit of study where the outcomes indicate future steps for teaching and learning, and secondly, as an assessment activity immediately following a lesson which summarises the main points, elicits questions, illustrates students' feelings during the lesson, or connects students' prior knowledge about the topic to the lesson.

For Clarke, Timperley, and Hattie (2003), formative assessment are assessment activities that occur throughout the teaching and learning process and are then used to develop more effective teaching and learning practice. As a means of informing the teaching and learning process, implying both immediacy and detail, formative assessment should focus on the processes and mechanisms for improving the curriculum while the responsibility of processing of information shifts from the teacher to the students (Dann, 2002).

Specific aspects considered to characterise formative assessment will be examined in the next chapter.

Gardner (2006) differentiates 'formative assessment' and 'assessment for learning' stating that the older terminology of 'formative assessment' is sometimes used to describe assessments taken over a period of time, correlated, and used to provide a summative or final assessment of the learning. Although the terms 'assessment for learning' and 'assessment to learn' (AtoL) have appeared more recently, they maintain the same practices as formative assessment though are less likely to use the assessment information in a summative application. In this research, these three terms will be used interchangeably.

Peer and Self- Assessment

Self-assessment is the process where students assess their own work against a scale or list of success criteria. Sadler (1998) believes it to be essential to learning as the student must be able to understand the learning goal and be able to assess what they need to do to achieve that goal. As the student learns to see their learning as a set of goals that they are capable of managing and controlling for themselves, they begin to work at a meta-cognitive level. Airasian (1996) contends that this procedure can be done independently by the student or in conjunction with the teacher.

To complement self-assessment, Sadler (1998) highlights the importance of peer assessment which is the process where students assess each others' work against a scale or list of success criteria then discuss their findings (Airasian, 1996). As the learners work together, they take on the roles of teachers and evaluators and Sadler notes that the dynamics of these groups vary considerably when the 'real' teacher is not present while the acceptance of criticism and the use of language also differ

when peers are working without direct involvement from the teacher (Black & Wiliam, 1998). Black and Wiliam also state that involvement in peer and self-assessment goes beyond checking for errors or weaknesses but requires the students to be active in their learning as they make clear what is normally unspoken.

Motivation

Motivation is an extremely complicated concept that is influenced by a variety of factors and is a vital component of learning. Brophy (1998: 3) considers motivation as:

“...a theoretical construct used to explain the initiation, direction, intensity, and persistence of behaviour, especially goal-directed behaviour.”

Within the context of the classroom, Brophy translates this construct into student motivation and considers it to be the amount of effort and attention students put into the various lessons and tasks. Thus, the very individualistic nature of motivation is evident as each student's incentive is subjective to their own experiences and reasons. This in turn influences their willingness to engage in lessons and learning activities.

The affects of intrinsic and extrinsic motivation on learning are inter-connected yet that relationship can be transformed as self-determination and self-efficacy develop. Self-determination is the motivation that is freely chosen and comes from one's self rather than from an external source (Deci & Ryan, 1991, cited in Brophy, 1998) while self-efficacy is a person's beliefs about their own capabilities to learn or perform at a specific level (Bandura, 1997). Brophy (1998) states that a reliance on extrinsic incentives can result in both a decrease of intrinsic motivation to continue a specific behaviour and a deterioration in performance if the learner's attention is on the

reward rather than the learning task. The learner will look to external reasons for learning rather than developing their internal, cognitive abilities. In contrast to this, intrinsically motivated students are more likely to enjoy learning experiences and to be self-reliant in developing their skills. This self-determination encourages independence so that they will engage in activities of their own volition.

The perceived value of the learning will also directly influence the learners' level of motivation. Hansen's (1989) expectancy x value motivation model considers the learners' level of expectancy to achieve the task as well as the value the learner puts on the task. The higher the value of the activity combined with a higher expectation of success leads to the learner being more highly motivated and engaged in the activity which connects directly to success with learning. Conversely, non-motivated learners who neither value the activity nor have high expectations for task success will reject the activity and refuse to participate.

Summary and Chapter Outlines

This chapter has set the direction for the rest of this thesis report. Background and demographic information has been shared so the setting or learning context has been established but also the reasoning behind the development of this study, and its purposes and aims. Specifically, the research questions regarding the effectiveness of peer and self- assessment strategies on student learning, motivation, and achievement provide the foundations and direction for the structure of this research as answers are sought.

Chapter two examines current literature on the themes of learning, motivation, motivation to learn, intrinsic and extrinsic motivation, formative assessment, and written language. This chapter attempts to connect these factors into the web of learning which results from the influence of a variety of motivational factors and environmental elements.

The next chapter explores the underpinnings of the research considering the interconnections between the epistemology, theoretical perspective, methodology, and methods of data collection. Following on is a brief description of the peer and self- assessment strategies trialled in this research, the description and justification of the data collection methods employed in this study, and the procedures used in their analysis.

Chapter four introduces the findings of the data analysis made from each of the collection tools. Recurring themes will be identified, changes in the pre- and post- intervention data, changes in student perceptions regarding motivational factors, literacy skills, and the enjoyment and usefulness of peer and self- assessment strategies.

Chapter five takes the findings from the data analyses and discusses the changes (or in some cases, lack of changes) and their significance in more depth. This information is linked to the literature and discussed as to the findings supporting the literature or not.

The final chapter summarises the main findings of this research project then considers the implications for practice, the limitations of the research itself, and directions for further research.

Chapter 2 - Literature Review

Introduction

A spider's web is an intricate and deceptively fragile interconnection of silken strands that expand outwards from a central point. Created by the spider, the filaments are structured so as to support each other in an irregular concentric pattern. The interlocking of these strands produces not only a complex interwoven product but also one that is stronger than one imagines. It is in this way that one can consider the interrelationships between motivation, formative assessment, and learning as it centralises within the learner. The stronger these elements and their interrelated features are linked, the stronger the results for the learner.

In this literature review, research surrounding the interlocking concepts of student learning and achievement, formative assessment, peer and self- assessment, motivation and its interrelated constructs surrounding motivation to learn, and written language will all be examined. These associated themes form the foundation of this thesis of examining the impact of peer and self- assessment on learner motivation and achievement.

Learning

Stipek (2001) considers learning to be a purposeful dynamic process involving conscious and deliberate activity while Brophy (1998: 165) defines learning as "...information processing, sensemaking, and advances in comprehension or mastery that occur while one is acquiring knowledge or skills." Implied within Absolum's (2006: 12) definition,

“Learning is the process of testing for a difference between what you currently do or understand, and what you want to do or be able to understand; and being able to take informed action and problem-solve to reduce the gap.”

is a learner's deeper awareness of their present learning with direction to their future learning. These ideas support findings (Black, Harrison, Lee, Marshall, & Wiliam, 2002; Clay, 1998) that learning is a shared responsibility between teachers and learners with the teacher providing motivation and support, and the learners, employing their own motivational factors and prior knowledge, find solutions to lessen the gaps specific to their own learning. It is also recognised that learning is an ongoing process where new gaps continually emerge and need to be reduced.

Studies (Absolum, 2006; Black, Harrison, Lee, Marshall, & Wiliam, 2002; James, 2006) demonstrate that learners need to take an active role in their learning and accept the responsibility and management of their learning. This empowerment of the learner 'owning' the learning process and what is learnt is a crucial element of effective learning. It is this ownership of skills, concepts, and understandings that will allow the learner to use them to understand and interact within a world that perpetually and rapidly changing.

Research (Wiseman & Hunt, 2001; James, 2006) suggests that students are naturally stimulated to learn when they encounter experiences that differ from their existing understandings and continually work to maintain order and predictability. It is the combination of the individual's internal cognitive factors with the external social environment which results in learning. Three components, cognitive / emotional, environment / social, and behaviour / performance continually interact and influence each other in a process of reciprocal interaction (Bandura, 1986, cited in Alderman,

2004). Varying in strength, each factor affects the others which in turn influences motivation, acts as a framework for self-regulation and as the basis for social-cognitive theory (Alderman, 2004; Bandura, 1997).

Motivation

Learning is a complicated endeavour and Brophy (1998) considers motivation, a highly complex and multi-faceted notion where its elements continually interact and transform, to be one of the most crucial factors in learning. Over many decades, motivation has evolved to the point where Harlen (2006: 61) appears to encapsulate present beliefs.

"Motivation is central to learning as both an input into education but also as an essential outcome of education if students are to be able to adapt to changing conditions and problems in their lives beyond formal schooling."

Taking that idea a step further, Katzell and Thompson (1990: 144, cited in Harlen, 2006: 61) consider motivation as "the conditions and processes that account for the arousal, direction, magnitude, and maintenance of effort" while Stiggins (2001: 36, cited in Harlen, 2006: 61) describes "motivation for learning as the 'engine' that drives teaching and learning."

Motivation to Learn

Brophy (1998: 162) defines motivation to learn as, "...a student's tendency to find academic activities meaningful and worthwhile and to try to get the intended learning benefits from them." Aspects of motivation specific to the learning process are recognised within the concept of motivation to learn with Harlen (2006) identifying six separate yet interconnected constructs. The interactions of these motivational

factors vary for each learner and have a major impact on the individual's learning. Because of their importance in learning, each feature will be considered separately.

Goal orientation

The classroom environment should provide a setting for success and achievement for learning yet it is the individual's motivational focus and the type of goals that each student adopts that will determine much of their success and achievement (Harlen, 2006). *Goal orientation* is a relationship between ability beliefs and motivation (Alderman, 2004) and, depending on how the learner perceives the goals of participating in a learning task, will determine exertions, and how the time spent for learning will be structured and prioritised.

Contrasting the attitude and work ethic of students with different goal orientations (Alderman, 2004; Brophy, 1998; Harlen, 2006; Stipek, 2002), the potential for successful learning becomes evident. Students who have a *learning or mastery goal orientation* are more motivated to persevere and work productively at learning something new, meet learning challenges by using a variety of progressively complicated strategies, use errors as a signal to modify strategies, and judge their ability on improvements made from previous work or against criteria of a benchmark. Conversely, those with a *performance or ego goal orientation* are more concerned with safeguarding their image of competence rather than the actual learning. They tend to employ passive learning strategies, judge themselves against others, regard ability as more essential than effort yet lose confidence and doubt their abilities when they encounter difficulties and are more likely to give up. Anderman, Austin, and Johnson (2001, cited in Alderman, 2004) highlight these learners' need for extrinsic

incentives. As a third type of goal orientation, *work-avoidance*, learners are unwilling to accept the inherent challenges within the task and will do anything to minimise the time and effort they need to apply to complete their work. Stipek identifies a correlation between performance goals and decreasing learning, and to an increase of work-avoidance goals as time at school progresses.

Elliott, Hufton, Willis, and Illushin (2005) admit that differentiating between '*approach*' and '*avoidance*' perspectives within performance goals has improved understandings yet the full effects on learning have yet to be determined. Learners who are *approach* oriented work towards a positive outcome while Alderman (2004) argues their concerns lie in proving their ability. In contrast, *avoidance* oriented learners work to avoid something that is unpleasant (Elliott et al.) whereas Alderman states that the learners' main aim is to protect themselves from being noticed as having low ability. Pintrich (2000, cited in Alderman, 2004) judges both to have consequences on learning as the focus is on peer comparisons and negative self-judgements rather than the learning.

The selection of goals is based on their appearance of achievability and worthiness, their benefit to the learner, the value the learner places on them, and the social and cultural contexts that provide opportunities for learning (Harlen, 2006). However, Schunk (1996) argues that goal orientation is subject to change and manipulation, thus, the classroom culture can impact on its focus. Equally, crucial motivational factors of long-term or future goals that exist within current learning behaviours have yet to be fully developed (Elliott, Hufton, Willis, & Illushin, 2006). *Possible-self theorists* suggest that future goals can influence effort as those who have ambitious

possible selves are more likely to achieve than those who lack those beliefs or ambitions (Pressley, Dolezal, Raphael, Mohan, Roehrig, & Bogner, 2003).

The *expectancy x value* motivation framework originally conceptualised by Atkinson (1964, cited in Stipek, 2002) considers the value of the goals or learning tasks in relation to the learner's expectations of success. The amount of effort a learner is willing to exert on a task or goal results from the degree to which they *expect* to achieve success when they make the effort and the degree to which they *value* those rewards and the involvement in the learning process (Brophy, 1998). Elliott, Hufton, Willis, and Illushin (2005) subdivide the value component into four types based on the learners' perceived value while Hansen (1989, cited in Brophy, 1998) distinguishes four levels of involvement in learning. Notably, correlating expectancies with values indicate that when individual's expectancies rise, so do their values yet when a person's values decline, expectancies also decline (Pintrich & Schunk, 1996, as cited in Elliott, Hufton, Willis, & Illushin, 2005).

Interest

It is the interactions between a person and particular aspects of the setting that results in *interest* yet it is the level and type of interest, *individual* or *situational*, which have a potent impact on learning. Interest increases motivation by influencing attentiveness, perseverance, and eventually, acquisition of knowledge and skills but also engages emotions and values (Alderman, 2004; Harlen, 2006; Stipek, 2002).

Personal or *individual interest* is the individual's natural reaction to particular experiences that develops over time and, as knowledge grows, enriches enjoyment

of the activity. Learners understand and process topics of personal interest to a deeper level (Harlen, 2006; Bergin, 1999, Krapp, 1999, both cited in Stipek, 2002) and are considered to be an enduring or dispositional appraisal of a topic.

In contrast, *situational interest* is the learner's response to the contextual factors existing in the environment and is especially pertinent for engagement when personal interest is absent. It is of greater value within a classroom as the teacher has more control over this than the personal interests of each student. The longevity of the interest is variable and is dependent on whether the learner develops any personal interest in the topic under study (Alderman, 2004; Harlen, 2006; Stipek, 2002). Elliott, Hufton, Willis, and Illushin (2005) consider the interaction between both types of interest within the learning process where surprising or stimulating practices may prompt situational interest but is unlikely to hold the learners' interest over a period of study.

Locus of control

Locus of control, one of the central concepts of Weiner's (1992, cited in Stipek, 2002) *attribution theory* and one that Harlen (2006) considers to be directly connected to self-esteem and self-efficacy, is the learner's perception of their success or failure as being under their own control or under the control of external forces. Outcomes are most commonly linked to ability and effort, and learners are more motivated to try if they believe they have control over the outcomes. Ability attributions will undermine learners' motivation whether they succeed or fail at a task while effort outcomes enhance motivation to achieve. Thus, an individual's belief, be it personal or environmental, about whether the effort they exert can or cannot change their ability

will shape their present and future responses to difficult tasks (Dweck, 1999; Pressley, Dolezal, Raphael, Mohan, Roehrig, & Bogner, 2003; Stipek, 2002).

Harlen (2006) differentiates learners with an *internal locus* as believing internal factors dictate success or failure and will put in the effort to attain that success while pupils with an *external locus* believe outside factors dictate their successes and failures and are less motivated to put in the effort or persist in overcoming obstacles. Regardless, Wiseman and Hunt (2001) acknowledge that locus of control can change as learners gain more confidence in their abilities and potential.

Incremental theorists argue that people either believe their intelligence and resulting academic performance to be at a fixed level or that their level of intelligence will increase or decrease based on the quality of learning experiences (Pressley, Dolezal, Raphael, Mohan, Roehrig, & Bogner, 2003). Those believing intelligence to be changeable from effort and experience are more motivated to achieve academically, especially following failure, while those who believe intelligence is fixed will believe nothing they do will improve the situation (ibid.).

Self-esteem

Self-esteem is the value people place upon themselves as both people and learners (Harlen, 2006). An individual's evaluation of their own value is conceptualised in Covington's (1992, cited in Alderman, 2004) *self-worth theory* which alleges people develop a range of motivational beliefs and behaviours as they struggle to maintain a positive view of their ability. Clarke (2003) contends that self-worth is primarily developed within the learner's home situation.

Learners are concerned about feeling valued and positively perceived by others (Stipek, 2002) yet the prevalence of 'competitiveness' within the classroom both detracts and undermines learning (Brophy, 1998; Alderman, 2004). Covington (1998, cited in Alderman, 2004) explains that people accept more accountability for successes and respond negatively when their self-worth is threatened as society often associates self-worth with one's achievements.

Students who approach their learning with confidence make more of an effort, persevere, and enjoy the learning situation whereas those lacking confidence will try to avoid the negative implications of failure and to preserve their self-worth by utilising defensive strategies. When taken to the extreme, students may attempt to discount the importance of academic success (Alderman, 2004; Harlen, 2006; Stipek, 2002). Thus, students who believe failure to be a lack of ability will blame other factors for the failure and, thus, protect their perceived ability. However, effort can be considered a 'double-edged sword' (Covington & Omelich, 1979, cited in Stipek, 2002) as crediting failure with poor effort rather than inability will 'save face' but effort is highly valued within a classroom so failure with little effort can elicit censure from the teacher. Ironically, the student protecting their self-worth is restricting their current performance and potential development (Brophy, 1998).

Self-efficacy

Considering *self-efficacy* (Alderman, 2004; Elliott, Hufton, Willis, & Illushin, 2005; Harlen, 2006) as the learner's judgement of their capabilities of successfully achieving a specific task at a specific point in time, it provides important motivational factors in determining and regulating behaviour, effort and persistence. Harlen

considers self-efficacy to be strongly linked to self-esteem and locus of control though more context specific whereas Elliott et al. equate self-efficacy to the expectancy component of the expectancy x value model.

An underlying assumption of self-efficacy is the difference between having the skills to do the job and using the skills in various situations; the learner must believe that the available strategies will, in fact, achieve their goal (Alderman, 2004; Stipek, 2002). This judgemental aspect of self-efficacy generates a desire to actively participate in learning while also producing either an *outcome expectancy* (individual's anticipation that a given action will generate a certain positive or negative product) or a *self-efficacy expectancy* (learner's judgement as to whether their capabilities are sufficient to perform the task to the particular result) or, in a group situation, a *collective efficacy* (group's shared belief that its combined abilities can produce the desired outcome) (Bandura, 1986, 1997, cited in Alderman, 2004).

Self-efficacy is a learned response that is developed over time as the learner experiences various successes and failures within the learning process (Harlen, 2006). Bandura (1997) acknowledges four main sources of information (actual experiences, vicarious experiences, verbal persuasion and physiological arousals for self-efficacy judgements in learning situations, which Smith (2001, cited in Alderman, 2004) states may interact though the influences will differ depending on gender and ethnicity. Wiseman and Hunt (2001) suggest that chronic failure can develop into a seemingly inescapable cycle which Weiner (1991, cited in Wiseman & Hunt, 2001) describes the result as *learned helplessness*. At this point, learners believe that no matter what they do, they can neither achieve success nor control events and

outcomes within their lives though Alderman (2004) asserts that it is not a global response by the individual but one that is specific to certain situations or topics.

Self-regulation

Self-regulation is identified as the learner motivating themselves or purposefully choosing behaviours and actions that will bring about learning success. Specifically, self-regulated learners can set and monitor their own goals while actively and effectively using metacognitive and learning strategies independently. They are motivated to learn, have a well-developed sense of self-efficacy, believe effort will increase academic success, can modify attributional beliefs, and accept the responsibility for their learning (Alderman, 2004; Harlen, 2006; Wiseman & Hunt, 2001).

Zimmerman (2001) suggests that self-regulated learners engage in a repeating three-part cyclical process involving *forethought* (planning and preparing for the learning), *performance or volitional control* (the processes that happen throughout the lesson that keeps the learner on task despite potential distractions), and *reflection* (the learner reviews the task). Alderman (2004) contends that self-regulation is influenced by both environmental and personal characteristics and that both need to provide support to develop the learners' capabilities.

Intrinsic / Extrinsic Motivation

The six constructs just reviewed play an influential role in determining how a student is motivated in their learning. *Intrinsic motivation* is described as the learner finding satisfaction and enjoyment in developing their higher level thinking skills and

conceptual knowledge through the learning process (Harlen, 2006; Kellaghan, Madaus, & Raczek, 1996, cited in Harlen, 2006). Taking this premise further is the concept of *flow* (Csikszentmihalyi, 1993, cited in Brophy, 1998) which occurs when the learner is so intensely engrossed with a task that extends both their physical and mental abilities that they may lose awareness of time and space. Thus, the idea that people are naturally inclined to develop skills and participate in learning-related activities without the need for external reinforcements as learning is fundamentally reinforcing (Stipek, 2002).

Deci and Ryan's (1991, cited in Brophy, 1998) *self-determination theory* advocates that people who are intrinsically motivated take goal-oriented action to achieve their undertaking. As long as three inherent psychological requirements (competence, autonomy, and relatedness) are met within the social setting, intrinsic motivation will be promoted.

Learners who engage in learning activities for external reasons or as a means to an end are *extrinsically motivated*. The learners' efforts are made either for a reward that may have little connection to the learning task or to avoid punishment and evidence reveals intrinsic motivation is weakened by extrinsic rewards over a variety of activities, populations, and reward types (Alderman, 2004; Brophy, 1998; Deci, Koestner, & Ryan, 1999; Harlen, 2006; Wiseman & Hunt, 2001).

However, between the extremes of intrinsic and extrinsic motivation is a zone of ambiguity where determining whether a reward supplies extrinsic or intrinsic motivation is difficult. The argument that both extrinsic and intrinsic motivations are

always present, although to varying degrees depending on the circumstances, represents the reality of learning as it requires a combination of both to maintain a learners' commitment in complex and arduous periods of learning (Alderman, 2004; Harlen, 2006; Hidi, 2000). However, research (Black, Harrison, Lee, Marshall, & Wiliam, 2002; Clarke, Timperley, & Hattie, 2003) indicates that the use of formative assessment structures in learning is identified as helping increase intrinsic motivation.

Formative Assessment

Research (Black & Wiliam, 1998; Clarke, Timperley, & Hattie, 2003; Dann, 2002; Weber, 1999) defines formative assessment as any assessment or ongoing monitoring process that encourages and develops student learning. It ranges from an assessment activity immediately following a lesson which demonstrates something about the learning or as an assessment process that is used continuously throughout the study with the resulting outcomes directing future teaching and learning. Utilising ongoing assessment activities can inform and develop more effective teaching and learning practices implying both immediacy and detail while focusing on the processes and mechanisms for improving the curriculum. The responsibility for the processing of information then shifts from the teacher to the students.

As assessment for learning supplies information about the students' learning during the learning task to both the learner and teacher, Clarke, Timperley, and Hattie (2003) reason that it also provides details for next-step learning. Consequently, as it is the learner who is the ultimate user of information from formative assessment,

equipping students with structures to self-manage their own learning gives them the opportunity to take a more active role in their learning while the teacher and peers provide support and guidance (Black & Wiliam, 1998).

The use of formative assessment strategies has proven successful in raising achievement levels, particularly for students who experience difficulty with learning, as clearly indicated in Black and Wiliam's (1998) seminal work in this area. Their research supplies evidence showing that students learn much better when they are active participants in their learning, motivated to learn, can manage and organise new information, practise, give and receive descriptive feedback, and examine and reflect on their learning. Assessment for learning not only encourages students to take more responsibility for their learning but also to be less dependent on teachers by viewing classmates as potential resources (Sebba, 2006). Alternatively, James (2006) considers formative assessment procedures tie in well with cognitive theories as students attempt to apply and understand new knowledge structures by scaffolding or building upon their prior knowledge while also providing opportunities to utilise concepts and strategies in different contexts. From a biological perspective, assessment for learning strategies attempt to co-ordinate the learning process with the improving understanding of the brain's development and functioning (Jensen, 2005).

Taking the key research findings of Black and Wiliam's (1998) work, the Assessment Reform Group (1999) broke down the crucial ideas of formative assessment as:

- sharing learning intentions with the students
- involving the learners in self-assessment

- providing timely and constructive feedback so the students recognise next steps learning and how to take those steps
- the belief that each pupil can improve

Each of these structures will be individually examined in more detail. An additional structure, questioning which was originally included in Black and Wiliam's research, will be considered within the feedback section.

Learning Intentions and Success Criteria

Equating learning intentions to the achievement objectives within the New Zealand curriculum documents, Clarke, Timperley, and Hattie (2003: 15) consider learning intentions to be the core of formative assessment as they "...describe the skills, knowledge, attitudes, and values the unit or lesson is designed to develop." As the objective or intended outcome of the lesson, learning intentions provide an identifiable purpose or meaning (Rayment, 2006) which need to be developed during the planning stage of the teaching process. However, Clarke et al. acknowledge the difficulties of aligning curriculum aims to learning intentions as neither the various curriculum documents nor the learning process adhere to one formatted system.

Sharing learning intentions with the students is the first of the 'active' elements of formative assessment and it acts as the base for learning, feedback, and assessment (Clarke, Timperley, & Hattie, 2003). By providing reasons for the learning by referencing it to their lives, learners see its relevance to the 'big picture' and will influence the effort they put into the work (ibid.). When the sharing of learning intentions is explicit, clearly understood, and customary for every lesson, it has its greatest impact on learning (Clarke, 1998).

Depending on the complexity of what is required, different time allotments are required for the three separate types of learning intentions which are: *concepts* (to understand...), *skills* (to be able to...), and *knowledge* (to know...) (Clarke, Timperley, & Hattie, 2003). Clarke (2003) contends that separating the skill and concept learning intention from the context will not only focus the learners' attention on the learning intention that can later be expanded and applied to different contexts, but it will also focus the teacher's feedback on the learning intention and potentially influence the structure of the lesson. However, this separation is not possible when working with a knowledge learning intention as the context forms the basis of what is to be learnt.

Clarke (1998) lists the impact of shared learning intentions as:

- students being more focused on their work
- increased perseverance
- improved quality of work
- fewer time wasting ploys utilised
- improved behaviour
- peer discussions based on the learning intention rather than personal interests
- pupils self-assessing against the learning intention whether they are consciously aware of doing it or not
- learners debate the suitability of the activity in relation to the lesson's purpose
- marking is easier

Where the learning intention tells the learner the 'what' of the lesson, the success criteria are the 'how' (Clarke, 1998). Clarke states that success criteria are not only inclusive of all students as they are specific to the different needs and stages of the learners but are also influential in helping students understand what success means as they provide measures for which the learners' work is going to be judged. The influence of success criteria on learning is dependent on whether *process criteria*, standards that clarify the important elements of either what is to be learned or provide direction to learners on how to approach the learning, or *product criteria*, standards that consider the end result rather than actual process for fulfilling the learning intention, as '*process*' success criteria are more helpful and effective for students' learning (Absolum, 2006; Clarke, 2003).

In developing or co-constructing success criteria, learners are able to provide ideas that are highly contextualised to the learning and thus, become more deeply involved with their own learning (Clarke, Timperley, & Hattie, 2003). Being so heavily involved in the learning process, students are more likely to question, examine and judge as they work.

Where poor academic performance has been connected to inconsistencies between teachers' and students' perceptions of goals, success criteria, and standards (Hounsell, 1997; Norton, 1990, both cited in Nicol & Macfarlane-Dick, 2006), other research (Black & Wiliam, 1998; Clarke, Timperley, & Hattie, 2003; Shepard, 2000, cited in Hall & Burke, 2003) indicates that having the learning intentions and success criteria written and highly visible will enhance the verbal understanding as learners are able to continually refer to the lesson's purpose and their specific responsibilities

for achieving that goal. Learners who understand how their work will be judged become more capable and dedicated learners as they develop their evaluative skills, produce higher standards of work, build ownership of the assessment process and, ultimately, control over their own learning. Thus, learning intentions with their associated success criteria provide a framework from which feedback can be developed, peer and self- assessment judgements can be fostered, and next-step learning can be structured (Black, Harrison, Lee, Marshall, & Wiliam, 2003).

Peer and Self- Assessment

Research (Assessment Reform Group, 2002; Black & Wiliam, 1998; Sadler, 1998) indicates that implementing formative assessment through peer assessment is particularly beneficial in improving learning as it is a crucial stimulus for self-assessment which in itself is essential to learning. The collaborative practices of peer assessment help learners develop the objectivity needed for proficient self-assessment by providing a concept of quality within a particular context and motivation to improve (Black, Harrison, Lee, Marshall, & Wiliam, 2003).

Developing a shared sense of what counts as 'good' work supports learners' development of peer and self- assessment strategies and abilities (Hall & Burke, 2003). Teaching pupils the necessary skills and strategies for taking the next steps in their learning is supported by Clarke's (1999) suggestion that a training period, including teacher modelling and class-wide scaffolding, will evolve into students supporting each other in developing and strengthening their peer assessment strategies, becoming more efficient in self-assessing their own work, and will also prevent potentially counter-productive consequences of superficial self-assessment.

In contrast, Race, Brown, and Smith (2005) propose that students are already informally peer assessing on a continuous basis by comparing their work and performances to their peers. The feedback may not be considered as authoritative as the teacher's but it is more readily available. The belief is that by setting up and facilitating 'formal' peer assessment, it is justifying and making respectable something that is already being done. From another perspective, research (Sadler, 1998; Sebba, 2006) suggests that skills for co-operative work need to be taught and practiced as peer assessment is very demanding on the learners' social and communication skills. When engaged in learning activities, learners are in a precarious situation of trying to balance three goals (completing the task, engaging in effective learning, and maintaining social relationships) concurrently so when conflict arises, students will prioritise social relationships over learning goals.

Self-assessment is essential to learning (Black, Harrison, Lee, Marshall, & Wiliam, 2003) as it provides opportunities for students to think about their learning (knowledge, skills, and attitudes) and to construct an understanding about themselves as learners (van Kraayenoord, 2003). It involves the megacognitive skills of self-reflection and self-evaluation (van Kraayenoord) as students assess against previous work or against achievement standards. Thus, students gain more control and management of their learning when they, one, know and understand the learning intention, two, know how to assess what needs to be done to achieve it, and three, know future targets for learning (Black et al.).

The need to develop student knowledge and understanding of how learning contexts and conditions, especially the role of assessment, influence their motivation and effort to learn, is crucial (Harlen, 2006). Using peer and self-assessment strategies helps develop and promote self-regulation and metacognitive abilities so energy can be focused on their learning. Thus, as the locus of control becomes internalised, confidence and self-efficacy will develop. It also allows learners to recognise difficulties as a necessary part of learning rather than a failure, advocates learners' identifying their problem areas and the strategies they use to overcome those obstacles, and acknowledge that students learn from not only each others' strengths and weaknesses but as well as from their own (Clarke, 1998; Race, Brown, & Smith, 2005).

Although Rayment (2006) identifies several risks with peer and self-assessment ranging from students' biases and level of confidence influencing judgements and making accurate analyses, positive outcomes for teachers have also been recorded (Black & Wiliam, 2006). More notably, researchers (Black & Wiliam, 2006; Black & Wiliam, 1998; Sadler, 1998) identify various unique values of peer assessment that enhance student learning, motivation, and achievement with feedback being one of the most influential.

Feedback towards Next-Step Learning

As Hattie (1992, cited in Clarke, 2003: 50) reveals, "The most powerful single moderator that enhances achievement is feedback." For feedback to be effective, research (Absolum, 2006; Black, Harrison, Lee, Marshall & Wiliam, 2002; Clarke, 2003; Hall & Burke, 2003; Sadler, 1998) indicates that while feedback guides the

teacher's attention to what needs to be taught, it also directs pupil's attention to what needs to be learned. The learner must explicitly and unequivocally understand the feedback, how it can be applied in the context of their work while also regulating and controlling the amount, content, and providing feedback on the feedback. Thus, the value of feedback, particularly oral feedback, in improving student achievement occurs when it relates to the learning intention and success criteria of the task itself while also supporting the difficulty of the learning process and the learners' effort to overcome those difficulties. Black and Wiliam (1998) specify that it is descriptive feedback without marks and grades that is associated with increasing achievement.

Conversely, findings (Black & Wiliam, 1998; Clarke, 2003; Nicol & Macfarlane-Dick, 2006) suggest that much of teachers' feedback is detrimental to students' progress as comments are often directed towards ability rather than effort, and on correction rather than improvement. Viewing feedback as a cognitive process disregards both the way it controls and is controlled by motivational beliefs. It is also suggested that feedback remains a transmission process as it is perceived to be controlled and to be the responsibility of the teacher. Counter to this, teachers generally consider feedback to be a form of accountability where the validity of oral (as opposed to written) feedback is questioned, and feelings of guilt are produced not only from all work not being thoroughly marked but also in regards to its impact on the learner. From another perspective, Absolum (2006) suggests that the value of peer assessment comes not necessarily from the feedback but from the various individual perspectives providing new insights about how to understand the intended learning. It is through self-reflection and sharing perceptions that pupils develop their strategic knowledge of how to go about improving and progressing their learning.

As feedback, the process of *reflection* opens the systems and processes of teaching and learning to purposeful and explicit examination where problems can be identified and solutions considered collectively (Absolum, 2006). From another perspective, Brophy (1998) stresses linking *reflection* back to the learning intention and success criteria as it not only gives students opportunities to evaluate their work, make corrections, and learn from those mistakes but it also re-emphasises the purposes and goals of the learning task, examines the processes and thinking of how the work was executed, and how successful they have been in doing the task, and reminds learners how the activity fits into the 'big picture'. Alternatively, feedback in the form of *prompts* (reminder, scaffolded, and example) can support learners to continue or improve their tasks and progress their learning based on the amount of support required (Clarke, 2003).

"Questioning is *not* a strategy for promoting further learning, but strategies and prompts can at times be posed as questions." Absolum (2006: 135) argues that feedback is guided by purpose while questioning, a linguistic form, is a useful method to find out what is unknown, confirm understandings, and strengthen reflection. In contrast, research findings (Black, Harrison, Lee, Marshall & Wiliam, 2003; Clarke, Timperley, & Hattie, 2003) consider questioning both an assessment and a teacher strategy allowing the teacher to discover what is known and to develop those ideas. Understanding the link between the question and the learning intention, and the effectiveness of increasing 'wait time' (Jensen, 1998; Rowe, 1986, cited in Clarke, Timperley, & Hattie, 2003) allow learners time to process their ideas before responding to a question. This, in turn, increases participation and sustained

discussions as student responses are used as a way to explore and develop student understanding.

Feedback is important for all learners though research (Alderman, 2004; Clarke, 1998; Hall & Burke, 2003; Harlen, 2006) suggests that it is particularly significant for lower achievers as feedback makes the criteria for success unambiguous. With clear guidance for success, pupils can reverse the negative trend of attributing poor performance to a lack of ability. Feedback and reflection allow individuals to *set targets* for their learning by considering their strengths and weaknesses which in turn allows them to learn at their own speed and build upon their prior knowledge. With teachers providing a continuum of what needs to be learned, learners can progress their learning along the scale. Thus, feedback not only plays a critical role in shaping students' beliefs of being capable of learning, of attempting their lessons, and assessing tasks successfully, but it also develops teachers' expectations that all students can achieve to high levels.

Each Learner Can Improve

Research (Absolum, 2006; Hall & Burke, 2003; Harlen, 2006) shows that feedback not only develops students' self-esteem and confidence to try in their learning, it also develops teachers' expectations that all learners can achieve to a high standard. As learners develop more proficiency and confidence in using formative assessment skills and strategies, they become more confident in themselves and their abilities to progress their own learning independently. As learner expectations rise, they become more confident of achieving success. This is especially valuable to struggling students as their beliefs about lacking ability can be reversed when they

receive clear guidelines in their learning and the feedback is structured towards the learning intention and criteria (Absolum, 2006; Clarke, 2003).

That all students can learn and achieve is directly affected by teacher efficacy and expectations (Alderman, 2004). According to research, Alderman summarises that teacher expectations develop from a variety of sources, are communicated to students in a variety of ways and significantly affect student achievement and motivation. Conveying positive expectations through teaching practices, strengthening teacher efficacy, developing 'floor expectations' (minimal requirements for all students to achieve) rather than 'ceiling expectations' that limit learning, and recognising the powerful influence of group and individual expectations will promote all students learning and achieving (ibid.).

The social nature of learning is planted firmly into the learning process through peer assessment as learners value certain aspects of assessment and learning more from their peers than their teachers (Black & Wiliam, 1998; Sadler, 1998). With peer assessment, the learners need to believe that what they are doing is helping others with their learning as others are helping them with theirs. It is also a way to develop and consolidate with their own learning and belief that they can improve.

The language curriculum provides a good base for developing and using formative assessment structures due to its underlying inclusion within all areas of learning and its extensive base of skills and strategies that are developed over a period of time. In particular, written language provides the foundations upon which formative assessment can be constructed.

Written Language

The New Zealand Curriculum Framework (MOE, 1993) provides the basis for learning and assessment programmes within New Zealand schools and is based on a balance between the requirements of the individual learners, society, and the economy (O'Rourke, 1993, cited in MOE, 1993). Among many things, this document outlines national achievement aims and objectives, establishes effective assessment procedures (using many formative assessment strategies and structures), and identifies essential learning areas and skills. It is here that the importance of language, in all of its forms (written, oral, and visual), is acknowledged as an underlying aspect in all learning.

The importance of writing as an essential tool for communicating and learning, Anderson and Bachman (2002: x (introduction), cited in Weigle, 2002) identify its expanding role from not only "...conveying information, but also in transforming knowledge to create new knowledge." Considered as both a social and cognitive activity (Weigle, 2002), the nature of writing is inherently linked to formal education and must be explicitly taught (Leki, 1992, cited in Weigle, 2002). Three inter-related concepts pertaining to students' acquisition and development of literacy practices are identified by the New Zealand Ministry of Education (MOE, 2006) with connections stemming from the unique pathway of development, directly influenced and constructed by the social settings, each learner follows in developing greater literacy skills and knowledge.

There has been a shift from studying the mechanics and grammar of writing to improving writing content as writing content and organisation now have a higher academic priority compared to conventions of language (Baker, Gersten, & Graham, 2003; Weigle, 2002). Research identifying the need for daily exposure and immersion in the writing process, not the product, focused on (Ruddell, 2006: 273), "...engaging children in productive writing behaviors and events that lead to ever-increasing writing fluency and sophistication..." According to Graham and Harris (2002, cited in Baker, Gersten, & Graham, 2003), the development of writing strategies and processes centres on the planning, revising, monitoring, evaluating, and managing of the writing process with *procedural facilitators* or *plans of action* proving beneficial in developing and organising writing (Baker, Gersten, & Graham, 2003).

The MOE (2006) has adopted an analytical framework of associated yet non-sequential ideas based on the inter-related processes used to generate texts. To write effectively, writers utilise a variety of strategies many of which relate to reading processing and comprehension strategies (MOE). Hayes (1996, cited in Weigle, 2002) emphasises the importance of reading as a central process in writing as a means to develop writing skills, including vocabulary, imagination, and topic knowledge, but also as a tool for editing and revising. Learning to use the strategies and to move between the writing processes competently, emphasis is placed on the need for excellent models and specific instruction along with practise, challenge, and enjoyment (MOE). However, Rief and Heimburge (2006) acknowledge the complexities of the writing process as it incorporates and frequently synchronises several skills and brain functions.

The impact of handwriting and spelling is also considered important as a lack of fluency and skill can weaken the process of composition and undermine the application of other writing processes. Graham, Berninger, Abbott, Abbott, and Whitaker (1997, cited in Baker, Gersten, & Graham, 2003) state that handwriting and spelling skills account for a significant proportion of the variability in writing with the importance of transcription skills seeming to escalate over time.

With the inherent connection between the components of language and the basis of language skills (Brice, 2004), Gregg and Hafer (2001, cited in Brice, 2004) consider that the basis of writing is formed by oral and reading language skills. The suggestion is that by using the activities and strategies within the article, oral language skills would be more closely connected to written language and result in improved written language work.

Summary

The image of the spider's web allows one to see interconnections between strands within a pattern that expands out from a central point. All the work that goes into producing this web originates from one individual but influences from internal and external factors affect its development. This symbol is applicable for the intertwining themes that run through this literature review.

The learner is clearly affected and influenced by their motivational beliefs as to how they approach a learning situation to the strategies they employ. These internal forces directly influence the effectiveness of their present and future learning. Using

formative assessment structures and strategies, the intention is to give the learners the skills to develop their learning at their own pace while building on from what they already know. As the learner gains more confidence in their learning abilities, their motivation to actively participate in the learning process also develops. Thus, as both motivational beliefs and learning success increase, so should achievement levels.

With the focus of written language on the multiple aspects that comprise the writing process, the use of an analytical framework not only provides the outline for the writing process but also supplies the basis for incorporating formative assessment structures to improve learning and achievement within that context.

The web of learning is complicated, unique, and reliant on the interlocking elements produced by the individual learners. As the filaments extend and support more and more attributes of motivation and learning, the learner will develop more skills, knowledge, and joy of the learning process. The use of peer and self- assessment strategies encourages students to take more responsibility for their learning and become more self-regulatory in their educational development.

Chapter 3 – Underpinnings of the Research

Introduction

This chapter will provide a theoretical framework for this research with attention to its epistemology, theoretical perspective, methodology, and methods of data collection. A further examination of methods will be provided along with the analysis procedures for the data gathered by each collection tool. A brief overview of the peer and self-assessment strategies trialled will be supplied as will the ethical considerations and limitations of this research.

Theoretical Framework of the Research

Considering the foundations of any research process, Crotty (1998) identifies four interconnected elements: epistemology, theoretical framework, methodology, and methods, which bind the process together around the research.

From the outset, action research seemed the best methodology to achieve my research aims as it integrates the processes of research and action (McNiff & Whitehead, 2006; Mills, 2000; Schmuck, 2006) which allows me to investigate and analyse my own professional practices in a systematic way so improvements to my practice could be made. It is also undertaken as part of the everyday practice with the generic process of action research is collaborative and parallels what is done formally and informally within a classroom (McNiff & Whitehead; Mills; Schmuck). It involves a repetitive, non-sequential cyclical process of planning, acting, observing, and reflecting (Kemmis & McTaggart, 2005) or initiation, detection, and judgement (Schmuck) where each phase learns from the previous one while shaping the next.

This demonstrates an improving and progressive process where any concerns that arise during the process can be dealt with in alternative cycles of activity known as side cycles or spin-offs (McNiff, 1988, cited in Piggot-Irvine, 2003).

Within this research project, numerous cycles were carried out following the basic sequence of planning, acting, observing, and reflecting. Once a formative assessment principle or specific peer or self- assessment strategy was planned and incorporated into the learning process, teacher observations and reflections would occur. In most cases, reflections would also include student feedback.

As the research questions of this project centre on discovering the effectiveness of different peer and self- assessment strategies on students' motivation and achievement within the written language context, action research allows individual examinations and assessments of each strategy for its motivational effects and its perceived usefulness in developing writing skills. However, because of its highly contextual nature, action research can be given as a set of general principles or illustrative examples, not as a set of precise prescriptions, as the results are likely to show neither 'representativeness' of the data nor add to wider insights (Denscombe, 2003; Neuman, 2007).

Embedded within this research project is the epistemology or theory of knowledge of constructivism. Crotty (1998) distinguishes constructivism as the unique way each individual attempts to make sense of the world and that each is as valid and credible as the others. In reference to theories of constructivist learning, Piaget focused on the person's individualised construction of knowledge while Vygotsky considered the

social construction of meaning (Gagnon & Collay, 2006). Both acknowledge the relationship between personal and interpersonal learning with reflection, an act of deliberate analysis, being the basis to constructing knowledge. Along the same lines is social constructivism (Roehler & Cantlon, 1997) which considers all knowledge to be socially constructed as learning occurs in a social setting that targets understanding.

Using constructivist principles, learners actively restructure information using problem-solving strategies to connect new material with their prior knowledge which can then be reflected upon. This process is first done collectively with guidance from the teacher but eventually, it becomes an independent activity where support is provided, by the teacher or peers, as required (Gagnon & Collay, 2006). Consequently, learning evolves from a social context to an internalised process (self-regulated). This co-constructive and communal learning process parallels the structures of formative assessment. Thus, constructivist models of learning best suit this research as they not only tie in closely to my own beliefs about teaching and learning but also into the formative assessment structures which form the basis of the research questions that structure this study.

In this particular study, the theoretical perspective or philosophical stance that connects to both the methodology and the epistemology is that of interpretivism. An interpretivist approach considers social reality to be the product of processes that have been collectively negotiated (Crotty, 1998), are based on the subjective ideas, principles, and perceptions that individuals hold about reality, and are very changeable as people alter, examine, build, and strengthen their perceptions

(Neuman, 2007). In this case, the social and procedural changes trialled within the learning process are open to the interpretative approach as I strive to understand how formative assessment affects student learning and motivation.

In response to the ever-shifting perceptions of social reality, qualitative data collection methods tend to be more suitable than quantitative as they use idiographic explanations, descriptive data, inductive reasoning, favour interpretive theories, and are naturalistic (Bogdan & Biklen, 2003; Crotty, 1998; Neuman, 2007), have more flexibility in research design, and usually involve less quantity of data but a more in-depth analysis (Glicken, 2003; Silverman, 2006). Qualitative research entails participating in others' lives to make sense of what they do and the interpretive process works to develop those understandings from the participant's perspective (Ezzy, 2002). However, quantitative methods also have a place in research as they attempt to establish connections between variables and expose patterns within the data from a more scientific orientation (Denscombe, 2003; Neuman, 2007).

In an effort to answer my research questions, I have used a variety of qualitative and quantitative methods. As each method has its own strengths and weaknesses, triangulating or using different data collection tools, not only helps the validity and reliability of the research, collaborate findings from different perspectives, but it also provides adequate amounts of useful data (Denscombe, 2003; Neuman, 2007; Silverman, 2006). However, using predominately qualitative measures allows me to probe deeper into the participants' ideas and beliefs about peer and self- assessment strategies and the perceived effects on the students' motivation and learning.

In setting up this study, each of the four elements of basic research needed to have connections to the social nature of learning and the development of shared meanings within a social reality. Obviously, constructivist learning theories tie in closely to these ideas while, as a methodology, action research provides the structures required for the methodical trialling, analysing, and making improvements within a busy classroom context. To understand the effects of those changes in their natural setting, qualitative methods were used whereas quantitative methods were used to establish patterns and comparative information. Analysing qualitative data from an interpretivist approach allowed changes to be identified within the social nature of the learning process.

Trialled Peer and Self- Assessment Strategies

Peer and self- assessment fit into the constructivist / interpretative paradigm as it is based on learners working together to make sense of the world from what each already knows. The construction of new knowledge starts from the individuals' prior knowledge being developed and re-structured within a social process. These interactions with the teacher and peers give support to the co-construction of new knowledge to produce a shared social reality. Obviously, this reality is continually changing and evolving as new information is incorporated, thus, an interpretative approach not only considers analysis of the collectively negotiated reality but also the changes within the individuals' perceptions. In this study, constructivism and interpretivism allow for changes in participants' attitudes and beliefs to be recognised with a comparison of pre- and post- intervention ideas.

In developing formative assessment practices, many of the strategies used to establish success criteria for the learning intention are also employed in developing peer and self- assessment strategies and skills. Within this study, modelling, think alouds, scaffolding, discussions, reflections, prompts, questioning, co-construction, use of exemplars, and co-operative group activities were employed, often in combinations. This developmental process begins as a collective, shared activity which eventually leads to independent actions. In other words, the strategies are developed within a training period (Clarke, 1998) as vicarious learning experiences, to cultivate an understanding and self-efficacy of the process (Bandura, 1996, cited in Stipek, 2002).

Before exploring the data collection methods and their associated analysis procedures, a description of each peer and self- assessment strategy that was trialled will be provided. The intention of using each of the outlined strategies was to support students in their learning within the written language context.

Traffic Lights

The *Traffic Lights* strategy allows students to self-assess their level of understanding or confidence by showing either a 'red' (having difficulty), 'yellow' (some confusion) or 'green' (all is well) 'light' (Black, Harrison, Lee, Marshall & Wiliam, 2002; Association for Achievement and Improvement through Assessment, 2001). Using these coloured indicators, the required support can be provided by either the teacher or peers and, as work progresses, 'lights' can be changed.

Thumbs

Thumbs is based on the same premise as *Traffic Lights* but the students self-assess by pointing the thumb in a particular direction to indicate their understanding (Association for Achievement and Improvement through Assessment, 2001). Thumbs pointing down equate to the red light, thumbs pointing to the side are equivalent to the yellow light, and thumbs up compare to the green. Correspondingly, the same support mechanisms are used as with the traffic lights.

Exemplars Next-Step

The New Zealand Ministry of Education (MOE, 2003) has provided authentic examples of student written language work, annotated to illustrate specific skills within that passage. Correspondingly, a progressive continuum showing development of skills within the surface (e.g. spelling, punctuation) and deeper (e.g. voice, structure) features has also been supplied. Copies of the exemplars and matrix (teacher translated into 'kid speak' – see Appendix 6) were provided to the students so they could self-assess their writing abilities against the benchmarks. This was followed by a teacher / student conference where, as a partnership, we reviewed the students' assessments against their work and decided together where on the exemplar continuum they were situated so achievements and their next step learning could be identified.

How Well (Appendix 7)

Co-constructively designed by myself and my students, this strategy (affectionately called 'Howl') involves the learners in rating 'how well' they achieved against the success criteria using a scale of one to four (1 - more care, 2 - okay, 3 - good, 4 -

very good). 'Howl' allowed for various self-, peer, and group assessment combinations. When working with a partner/s, there would be discussions of the rating against the criteria and on ways to improve the work. If self-assessing, students would have to identify evidence for their ratings. Peer or class-wide reflections on the assessments would also pull in others and their ideas.

How Well Plus (Appendix 8)

Following yet extending the same format of 'How Well', this strategy has space for specific comments on areas of success and areas for improvement. 'Howl Plus' was developed to identify more clearly the reasoning behind the ratings of the criteria and to be more enduring as the assessor's ideas are written for future reference. Although the comments were written, they were also discussed to ensure understanding.

Each strategy was assessed on enjoyment of use and perceived ability to improve written language skills. Those findings will be explored more fully later in this project.

Data Collection Methods

Data collection methods are described (Crotty, 1998: 3) as, "... the techniques or procedures used to gather and analyse data related to some research question..."

There are numerous collection methods with some being more suitable to specific methodologies than others. Regardless, the methods have to fit to the methodology to answer the questions that form the basis of the research.

Research (Denscombe, 2003; Mills, 2000; Schmuck, 2006) suggests that one of the strengths of action research is that a variety of different collection techniques can be employed. By using various sources to collect information and by using both different qualitative, to cover the taxonomy of qualitative data collection techniques of experiencing, enquiring, and examining, and quantitative techniques, a wide range of information has been gathered to answer the research questions. The systematic gathering and reflection of data from multiple sources supports not only the principles of triangulation, but also the validity and reliability of the research project.

Questionnaire (Appendix 9)

A questionnaire is a list of statements that individuals respond to privately and in a written form (Schmuck, 2006). In this case, a questionnaire was utilised, both before and after the interventions, to gain comparative information regarding the participants' opinions, beliefs, and motivational factors (Denscombe, 2003) within a literary context. This links into the research questions regarding motivation, perceived ability to achieve, and effectiveness of strategies. Compared to a structured interview method, the questionnaire provides an extensive range of information in a short space of time (Mills, 2000). Before its actual administration, the questionnaire was trialled by age-equivalent, mixed ability students from another class and suggested changes were made before it was given to the research participants.

The questionnaire is divided into three sections. The first section collects ordinal data as participants rank their opinions regarding different aspects of literacy on a four-point Likert scale (Scott & Usher, 1999). Although this attitude scale

presupposes responses, it can be compared quantitatively in a standardised way although the causes or amount of differential between the ratings remains unknown (Denscombe, 2003). The second section is a structured rank order list (Scott & Usher, *ibid*) which has the participants rating a number of potential motivational factors in order of importance. Finally, participants are asked to indicate their favourite factor of the given oppositional constructs, and to answer simple open factual questions at the end of the final two sections to gain any further information that the researcher may not have considered (Scott & Usher, *ibid*).

Strategy Evaluation Form (Appendix 10)

After learning, using, and practising each strategy, an evaluation form regarding that particular strategy was completed. Similar to the format of the questionnaire, a Likert scale was used to rate the level of enjoyment in using the strategy and the perceived level of effectiveness in developing writing skills. After each attitudinal rating, space was provided for clarifying and justifying responses. These forms were specifically designed to provide answers to the research questions regarding the ability of peer and self- assessment strategies to affect motivation and their perceived ability to increase achievement. They were also used to gain more in-depth information about individuals' feedback and feelings in a brief amount of time rather than a general response from a class-wide discussion or interview schedule (Mills, 2000).

Teacher Journal – Field Notes / Observations

Considering journals, field notes, and observations as tied into a conceptual whole for qualitative data gathering, the processes and outcomes vary yet overlap (Mills, 2000; Neuman, 2007; Silverman, 2006). Observations, a common technique used

by practitioners, allow for the monitoring and modifying of lessons based on the interactions within the classroom. Field notes are the written records that track those observations or happenings in class and are often written in teacher journals. This provides a narrative account of observations for methodical reflection of their practice.

As an active participant observer (Mills, 2000; Schmuck, 2006), I was totally and overtly immersed in the situation with in-depth insider knowledge but without the time to systematically record observations. I used the 'observe and look for nothing' and 'look for paradoxes' techniques (Mills) which would, in various ways, supply information towards answering my research questions. I would quickly record key words or short notes about various aspects and feelings that occur within a class when something new is being tried which would then act as reminders when I got time to expand those ideas. Scheduling written language to just before lunch, I spent many lunchtimes completing my notes, observations, personal and participant comments, reflections, possible improvements or changes, and anecdotes. These notes would then be re-read at different times for further reflection and guidance in the action research cycle.

Participant Workbooks - Artefacts

At the beginning of the research, each learner (participant or not) received an exercise book, affectionately known as our 'moo' book (MU – Massey University!). These books, used for their written language during this study, served parallel purposes. One, they were part of the everyday written language programme running within the classroom so they provided evidence of skill development and

achievement (Mills, 2000) that is used in school assessment procedures as well as indicating next step learning. The written language samples were also the foundations for utilising, developing, and evaluating the different peer and self-assessment strategies which, in turn, provided direct evidence for answering the research questions.

Semi-Structured Interviews / Informal Discussions

Both the interviews and discussions are oral conversations, ranging in size from one-to-one to whole class, which involve questions or discussions on specific topics (Schmuck, 2006). Where possible, notes were entered into my journal at the time of or soon afterwards and I did my best to record accurately what was said or the essence of what was said. When used as a reflection technique in an effort to gain a better understanding of the learners' thinking and opinions, participants' comments once again became field notes. In this case, semi-structured interviews (Scott & Usher, 1999; Schmuck, *ibid.*) were used to clarify ambiguous or unreadable comments on the questionnaire or strategy evaluation form with participants' responses written on the form verbatim and analysed within those methods.

There was only one specific discussion that will be analysed separately from the rest of the data collected with this method as it dealt with formative assessment structures already being used as part of the everyday learning process. Participants' ideas were written on the large papers taped to the blackboard so at a later time, ideas could be expanded, reflected upon, and analysed.

Each of these data collection tools provided a specific means to gain information to answer the research questions. The triangulation or collection of information by multiple methods strengthens and supports the data based on the use of different collection methods. Where the questionnaire offers comparative information regarding the participants' opinions, beliefs, and motivational factors within a literary context, the other instruments supply information regarding the effectiveness of formative assessment strategies. Whereas the student workbooks provide the basis for the practical application of the different strategies being trialled, the strategy evaluation forms denote student reflections regarding the effectiveness of those specific strategies, while semi-structured interviews and informal discussions were used to clarify or expand students' ideas regarding the AtoL structures and strategies. From a contrasting perspective, the field notes and observations recorded by the teacher allowed for the monitoring and modifying of lessons and teaching practice based on the happenings and interactions within the classroom.

Data Analysis Procedures

The aim of this study is to explore the effects of formative assessment strategies on student learning, achievement, and motivation. With the cyclical nature of action research, data analysis is an ongoing activity as what has been done is reflected upon then used to inform future directions. Correspondingly, analysing and justifying the use of qualitative collection tools comes down to on an interpretist approach in an effort to gain insights into the students' beliefs and ideas regarding literacy and learning through peer and self- assessment strategies.

Before examining the data analysis procedures in detail, research sub-question 3 (How do different peer and self- assessment strategies affect the motivation and achievement of non-motivated, underachieving learners compared to motivated, achieving learners?) focuses on two types of learners (non-motivated underachievers and motivated achievers). The division of the students into the two groups was conditional on participants' level of achievement within written language (based on a school-wide teacher co-operative assessment process to level students' work based on the MOE exemplars), their work ethic, their answers to the questionnaire (in regard to motivational factors), and teacher 'insider knowledge'. As a result, nine learners are considered in the non-motivated, underachieving group with the remaining 17 students in the second group. This division was never a part of the practical work within this study but rather in the sorting and analysis of the gathered data in respect to sub-question 3.

Questionnaire

In analysing the first section of the questionnaire, the total number of responses for each of the four answer options of the Likert scale for both August and December was recorded. Each response option had a designated point value where answers at one end of the scale indicate a more negative reaction (low value) to the question while the more positive reactions (high value) occupy the other end (Mills, 2000). The means and rankings were then calculated based on the raw score per rating level. Based on the information being collected, each of the 14 questions were divided into one of the four broad headings of *ability* (2, 3, 4), *enjoyment* (1, 5, 12, 14), *influence* (8, 9, 10, 11, 13), and *connections* (6, 7).

The *ability* questions revolved about the learners' beliefs about their proficiency in applying their skills and knowledge in written language while the *enjoyment* questions refer to the level of pleasure or satisfaction participants feel when involved in different literacy activities. In the *influence* section, the participants had to consider the impact of five different factors (spelling, handwriting, punctuation, editing and revising, planning and organising) on their story writing. The two *connection* questions explored the participants' beliefs regarding the connection between reading and writing.

In the next section, learners had to rank or order ten different motivational factors for writing. Their August and December responses were recorded under each of the numbered ratings for each of the incentive features. As a result of the extra space provided for learners to include other motivational factors, key ideas, themes, and new ideas could be identified (McNiff & Whitehead, 2006).

Paired opposites dealing with different aspects of the writing process comprise the final section of the questionnaire. Learners' preferences were totalled for each of the August and December administrations while additional information presented in the supplied space was correlated into groups.

By having participants complete the same questionnaire at both the beginning and ending of the research, a structure for a comparative analysis resulted. Changes in motivation and beliefs based on various factors related to the peer and self-assessment strategies would be evident from the perspective of the participants.

Strategy Evaluation Forms

After a period of learning, practising, and applying different peer and self-assessment strategies, each learner completed an evaluation form. It was analysed in a similar manner to the first part of the questionnaire due to its inclusion of Likert scales. However, there is no comparative information as the assessment occurred only after the intervention trial.

Following each attitude scale, space was purposefully provided so learners could clarify and expand their answers. In analysing these more in-depth responses, I hand recorded similar ideas under specific headings or codes as a way to identify key ideas, recurring themes for each strategy, and possible connections.

Teacher Journal – Field Notes / Observations

A daily journal containing field notes and observations was compiled as part of the reflective practice element of action research (Mills, 2000). It allowed me to review and process things instantly and again as a delayed reflection. Thus, over numerous readings, I was able to code the field notes to specific headings that not only condensed the data to manageable amounts but also indicated emerging patterns, helped identify key ideas or recurring themes, connect different ideas, and notice unexpected or unusual findings (Neuman, 2007; Silverman, 2006). These would then guide future teaching and learning while also providing data to answer the research questions on the effectiveness of different peer and self-assessment strategies.

Participant Workbooks – Artefacts

As with analysing the teacher journal and after numerous re-readings, I once again used coding structures to look for main ideas, recurring themes, as well as connections or gaps in the teaching / learning process (Mills, 2000; Neuman, 2007; Silverman, 2006). The 'moo books' not only provided physical evidence of the students' progress by comparing progressive efforts but also in supplying details on whether peer and self- assessment strategies were being utilised competently, whether they were meeting the learners' diverse needs, and whether they were helping to raise student achievement levels.

Semi-structured Interviews / Informal Discussions

As previously noted, data gathered from the semi-structured interviews used to clarify written answers became part of the questionnaire or strategy evaluation form analyses. Thus, analysis is as described in each of those collection methods.

Informal discussions often became part of the teacher journal though one class-wide informal discussion, held for specific purposes, was analysed separately from other data. Once again, coding the gathered information after successive re-readings provided the structuring for data analysis.

Ethical Considerations

When research is conducted with human participants, the protection of the rights and duties of the participants, researchers, communities and institutions are extensive (McNiff & Whitehead, 2006; Mills, 2000; Schmuck, 2006). The Code of Ethical Conduct for Research, Teaching and Evaluations Involving Human Participants

(Massey University, 2006) list various principles to ensure acceptable codes of practice. The headings and accompanied information in this section are based on the principles of the Code of Ethics established by Massey University that pertain directly to this research project.

For this study, a full application was completed for the Massey University Human Ethics Committee (MUHEC) and approval gained (Appendix 1).

Conflict of Role / Interest

As an authority figure, the teacher has basic control of everything that happens in a classroom from the learning programme itself to expectations of student behaviour. Conversely, the learner is expected to adhere to those rules and expectations as well as participate in the learning programmes. This power dynamic that exists between teachers and students cannot be minimised when considering its effect within action research (Denscombe, 2003; Mills, 2000). However, action research is part of the everyday running of the class programme so the conflict between teacher / researcher and participants is present regardless of research.

An awareness of the reflexivity variable is paramount as my 'insider knowledge', including my understanding of the situation and subjective knowledge of the participants, may restrict awareness or acknowledgement of important aspects of the study or compromise objectivity (Denscombe, 2000). Thus, to minimise potential conflict between my responsibilities as teacher and researcher, I attempted to keep the research process transparent, honest, and clearly understood by all involved through both written and oral communications, preserving anonymity wherever

Respect for Privacy and Confidentiality

Codes of practice and ethical structures strongly suggest that maintaining the confidentiality of individuals and institutions is critical (Mills, 2000; Neuman, 2007). To avoid any potential negative ramifications for their participation or non-participation in this research project, maintaining the confidentiality of the participants or community or institution is essential. Although one can not guarantee absolute confidentiality, steps have been taken to ensure privacy for both the participants and the worksite with no names or specific identifying information being used.

Students who chose not to be involved in this study were in no way treated differently or set apart from the participants other than their data not being used in the thesis. All learners, participants or not, received workbooks and instructions to ensure equal treatment from their peers and access to the learning without embarrassment.

Due to the dual purpose of this research, professional development to improve my practice and to improve student achievement outcomes, some of the information gained from this research project was also part of the regular school-wide assessment schedule. Because of this, identification of work was required. Names were also used on the questionnaires and evaluation forms though not identified in the writing of this report. These aspects were conveyed in the Information Sheets.

Other Ethical Considerations

In accordance to the MUHEC application, I could not envisage any problems regarding potential physical, mental or emotional harm to participants, researcher, community, and university in relation to this research project.

Although culture is an important factor in learning, it will not be used as an analytical tool within this research project but rather to describe the ethnic composition of the class.

Storage of the signed consent forms and gathered information have been stored in a locked cupboard to prevent unauthorised access. This information will be held in a secure location by my university supervisor for the required five year period when it will be destroyed.

The requirements set out within the Massey University Code of Ethical Conduct for Research, Teaching and Evaluations Involving Human Participants, in conjunction with the Massey University Human Ethics Committee, have been carefully adhered to as to ensure the rights of all involved with this thesis project.

Summary

This chapter has provided a justification for the theoretical framework used within this research project as all four elements, epistemology (constructivism), theoretical perspective (interpretism), methodology (action research), and methods (qualitative and quantitative) of data collection, show strong connections to the changing social reality based on the social aspects of learning and knowledge construction. Ethical considerations regarding this study were examined to ensure the rights of all involved were safeguarded. Also included in this chapter were brief overviews of the trialled strategies, an examination and justification of the specific methods used within this study, and the analysis procedures for the gathered data. The next chapter will provide a more detailed analysis of that accumulated information.

Chapter 4 – Data Analysis

Introduction

Based on the data collection methods described in the previous chapter, this chapter will present the data that was obtained using those tools with recurring themes and key ideas identified within each of the different sections.

Data Analysis

Questionnaire (Appendix 9)

The questionnaire was administered both before and after the trialling of different peer and self- assessment strategies. As the questionnaire is divided into three sections, each part will be analysed separately with a comparison of responses received for both August and December. In each section, results often showed there was little difference in the results of the two sampling months.

Part One – Attitudinal Scales

The 14 questions that comprise the first section of the questionnaire have four possible responses along a Likert scale. Tables 4.1a – d indicate the number of responses for each of the four levels for each of the 14 questions including the percentage, raw score, and weighted mean. Based on the information being collected, each of the 14 questions was divided into one of the four broad headings:

- ability (2, 3, 4)
- enjoyment (1, 5, 12, 14)
- influence (8, 9, 10, 11, 13)
- connections (6, 7)

Information gained in each section will be analysed separately.

Ability

The *ability* questions refer to participants' self-beliefs in their capabilities of applying 'punctuation' (2), 'organising their story' (3), and making their story interesting to the reader by 'using description' (4). Table 4.1a shows the division of responses made by the participants.

Table 4.1a – Attitude scale responses - Ability

Question Number	Not at all / Not so good		A bit / Okay / A little		Quite a bit / Quite good		A lot / Very much		Weighted Mean	
	Aug	Dec	Aug	Dec	Aug	Dec	Aug	Dec	Aug	Dec
2 Use punctuation correctly	30.8 (8)	12.5 (3)	15.4 (4)	29.2 (7)	42.3 (11)	58.3 (14)	11.5 (3)	- -	2.35	2.46
3 Organise story	19.2 (5)	4.2 (1)	26.9 (7)	33.3 (8)	23.1 (6)	54.2 (13)	30.8 (8)	8.3 (2)	2.65	2.67
4 Use description	15.4 (4)	16.7 (4)	46.2 (12)	25.0 (6)	34.6 (9)	41.7 (10)	3.8 (1)	16.7 (4)	2.27	2.58

Showing inconsequential changes in the weighted means (+.11, +.02, and +.31 respectively), the participants' attitudes towards 'using punctuation correctly' (2), 'organising a story well' (3), and using 'using description (4) show little change between August and December. However, responses to questions 2 and 3 follow similar trends with over half of the participants perceiving their abilities to be both 'quite good' in December. This correlates to decreases at both ends of the scale noted in the August results. The perceived ability to 'organise a story' (3) has the largest drop (-22.5% in the highest rating sector) of any factor within the entire first section of the questionnaire. This contrasts with 'using description' (4) which,

compared to the other features in this part, has the only increase (+13.7%) in the 'a lot' quadrant.

Although the means show little change in students' perceived abilities to use punctuation, description, and organisational skills, percentages show their strong beliefs in their ability to actually use those skills.

Enjoyment

The *enjoyment* questions refer to the participants' level of pleasure or satisfaction they feel when involved in different literacy activities including reading (5), writing (1), planning and organising their writing (14), and editing and revising their writing (12). Table 4.1b shows the levels of responses made by the participants.

Table 4.1b – Attitude scale responses – Enjoyment

Question Number	Not at all / Not so good		A bit / Okay / A little		Quite a bit / Quite good		A lot / Very much		Weighted Mean	
	Aug	Dec	Aug	Dec	Aug	Dec	Aug	Dec	Aug	Dec
1 Enjoy writing stories	7.7 (2)	4.2 (1)	34.6 (9)	37.5 (9)	34.6 (9)	41.7 (10)	23.1 (6)	16.7 (4)	2.73	2.71
5 Enjoy reading	3.8 (1)	8.3 (2)	23.1 (6)	16.7 (4)	23.1 (6)	33.3 (8)	50.0 (13)	41.7 (10)	2.81	3.08
12 Enjoy editing and revising	26.9 (7)	12.5 (3)	30.8 (8)	29.2 (7)	15.4 (4)	41.7 (10)	26.9 (7)	16.7 (4)	2.42	2.63
14 Enjoy plan & organise	11.5 (3)	8.3 (2)	19.2 (5)	16.7 (4)	19.2 (5)	33.3 (8)	50.0 (13)	41.7 (10)	3.08	3.08

Looking first at the weighted means, again there is little shift in participant attitudes (-.02, +.27, +.21, and unchanged, respectively) towards enjoying 'writing stories' (1), 'reading' (5), 'editing and revising' (12), and 'planning and organising' (14).

Interestingly, 'enjoying writing stories' (1) is the only result that decreases (a minimal -.02) while question 14 is only one of two factors whose weighted means remains fixed for both months.

Examining the percentage data more closely, a similar pattern emerges in the results for questions 5 and 14. Half of the participants rate themselves at the highest rating level in August but share a parallel decline in December. These drops correlate to increases in the third rating sector while there are minor changes in the lowest two levels between the two months. Interestingly, students' attitudes of all these factors show a decline at the highest rating level.

Children's attitudes towards 'editing and revising' (12) has over half of them rating themselves in the two lowest sectors in August yet another quarter rating themselves in the highest portion of the scale. Those results basically reverse in the December as over half consider the post-writing process in the two highest positive scale sectors. In regards to the writing process itself, 'enjoying writing stories' (1), shows little change in between monthly results though distribution trends of responses remain high in the two central quadrants.

Yet again, there is a limited shift in attitudes towards the enjoyment of specific literary activities. The learners indicate a strong enjoyment of 'reading', 'editing and revising', and 'planning and organising' and, to a lesser degree, 'writing stories'.

Influence

With the questions that comprise the *influence* section, the participants had to consider the significance of five different factors, spelling (8), handwriting (9), punctuation (10), editing and revising (11), and planning and organising (13) on their story writing. Table 4.1c indicates the participants' responses to these writing influences.

Table 4.1c – Attitude scale responses – Influence

Question Number	Not at all / Not so good		A bit / Okay / A little		Quite a bit / Quite good		A lot / Very much		Weighted Mean	
	Aug	Dec	Aug	Dec	Aug	Dec	Aug	Dec	Aug	Dec
8 Spelling influences	19.2 (5)	16.7 (4)	23.1 (6)	25.0 (6)	34.6 (9)	25.0 (6)	23.1 (6)	33.3 (8)	2.62	2.75
9 Handwriting influences	34.6 (9)	16.7 (4)	15.4 (4)	29.2 (7)	23.1 (6)	41.7 (10)	26.9 (7)	12.5 (3)	2.42	2.50
10 Punctuation influences	15.4 (4)	4.2 (1)	42.3 (11)	25.0 (6)	15.4 (4)	45.8 (11)	26.9 (7)	25.0 (6)	2.54	2.92
11 Influence - Edit and revise	15.4 (4)	- -	11.5 (3)	8.3 (2)	30.8 (8)	29.2 (7)	42.3 (11)	62.5 (15)	3.00	3.54
13 Influence - Plan/organise	- -	- -	15.4 (4)	25.0 (6)	26.9 (7)	8.3 (2)	57.7 (15)	66.7 (16)	3.42	3.42

It is in this category that the means have their greatest spread between the August and December responses from an unchanged result in 'planning and organising' (13) to the largest increase (+.54) in 'editing and revising' (11). There are positive yet minimal shifts in students' beliefs about 'punctuation' (10), 'spelling' (8), and 'handwriting' (9) (+.38, +.13, and +.08 respectively).

Considering the data from the percentages, learners' responses indicate a considerable change of attitude when considering the influence of 'editing and revising' (11) on their writing. Ironically enough, although the pre-writing processes of 'planning and organising' (13) showed no change in its mean, 66.7% of all participants believed it to be the most influential of all the factors.

There is little change in learners' beliefs about 'spelling' (8) between August and December at the two lowest levels. However, the two highest ratings reverse between August and December with a third of participants believing that spelling has 'a lot' of influence on their writing. Conversely, there are a lot of attitudinal changes regarding the level of influence of 'handwriting' (9) with December results show a shift from the extremes towards the central sectors. The perceived influence of 'punctuation' (10) on writing sees large decreases in the first two quadrants of the scale with the largest increase (30.4%) in this table cited in the third sector, 'quite a bit'.

Learners obviously feel very strongly about the influence of 'planning and organising' and 'editing and revising' on their writing in August and even more so in December. Responses towards also indicate students' firm beliefs about the potent impact of 'spelling' and 'handwriting' on their story writing whereas 'spelling' is more evenly distributed in student beliefs.

Connections

The two connection questions have participants considering the affects of reading on how well they write (6) and the imaginativeness of their stories (7). Responses

indicate positive shifts (+.50 and +.46) in the participants' awareness of the connection and impact of reading on writing as indicated in Table 4.1d.

Table 4.1d – Attitude scale responses - Connections

Question Number	Not at all / Not so good		A bit / Okay / A little		Quite a bit / Quite good		A lot / Very much		Weighted Mean	
	Aug	Dec	Aug	Dec	Aug	Dec	Aug	Dec	Aug	Dec
6 Reading affects writing	15.4 (4)	4.2 (1)	26.9 (7)	25.0 (6)	42.3 (11)	29.2 (7)	15.4 (4)	41.7 (10)	2.58	3.08
7 Reading affects imagination	23.1 (6)	4.2 (1)	23.1 (6)	25.0 (6)	34.6 (9)	41.7 (10)	19.2 (5)	29.2 (7)	2.50	2.96

The 'affects on imagination' (7) show increases in the higher sections of the scale that correspond to the sound decrease in the lowest rating sector. However, it is the 26.3% increase in the 'a lot' sector for 'reading affecting writing' (6) that clearly shows the biggest change in student attitude at the highest level of the scale.

Participants indicate a strong awareness of the connection between reading and writing increasing to 70.9% in the two highest rating levels in December.

Part two – Rankings

This section of the questionnaire involves the participants ordering different motivational factors in order of importance. Table 4.2 illustrates the array of responses for each factor, including the percentage, raw score, weighted mean, and rank.

Table 4.2 – Rankings of different motivational factors

Statement Number ⇓ ⇓	M O N T H	⇓⇓ Order / Ranking of Statement ⇓⇓ (Rating 1 – most important in motivation, Rating 10 – least important in motivation)										Mean	Rank
		1	2	3	4	5	6	7	8	9	10		
1 Teacher praise	Aug	26.9 (7)	3.8 (1)	23.1 (6)	7.7 (2)	11.5 (3)	3.8 (1)	11.5 (3)	-	7.7 (2)	3.8 (1)	6.96	1
	Dec	12.5 (3)	25.0 (6)	12.5 (3)	12.5 (3)	8.3 (2)	8.3 (2)	-	4.2 (1)	4.2 (1)	12.5 (3)	6.63	1
2 Peer Praise	Aug	-	15.4 (4)	11.5 (3)	11.5 (3)	7.7 (2)	19.2 (5)	11.5 (3)	7.7 (2)	7.7 (2)	7.7 (2)	5.46	4
	Dec	12.5 (3)	12.5 (3)	12.5 (3)	12.5 (3)	12.5 (3)	8.3 (2)	8.3 (2)	8.3 (2)	12.5 (3)	-	6.25	2
3 Teacher – must do	Aug	3.8 (1)	15.4 (4)	-	7.7 (2)	3.8 (1)	15.4 (4)	-	15.4 (4)	23.1 (6)	15.4 (4)	4.69	10
	Dec	4.2 (1)	-	8.3 (1)	20.8 (5)	12.5 (3)	-	4.2 (1)	16.7 (4)	8.3 (2)	25.0 (6)	4.38	10
4 Teacher tips	Aug	11.5 (3)	15.4 (4)	7.7 (2)	15.4 (4)	3.8 (1)	3.8 (1)	11.5 (3)	19.2 (5)	7.7 (2)	3.8 (1)	5.88	3
	Dec	12.5 (3)	16.7 (4)	8.3 (2)	8.3 (2)	12.5 (3)	8.3 (2)	20.8 (5)	4.2 (1)	-	8.3 (2)	6.21	3
5 Enjoy topic/share	Aug	15.4 (4)	3.8 (1)	15.4 (4)	15.4 (4)	11.5 (3)	11.5 (3)	7.7 (2)	11.5 (3)	7.7 (2)	-	6.27	2
	Dec	12.5 (3)	-	12.5 (3)	12.5 (3)	16.7 (4)	12.5 (3)	8.3 (2)	12.5 (3)	8.3 (2)	4.2 (10)	5.67	5
6 Peers - share ideas	Aug	7.7 (2)	7.7 (2)	11.5 (3)	3.8 (1)	19.2 (5)	3.8 (1)	23.1 (6)	11.5 (3)	3.8 (1)	7.7 (2)	5.42	5
	Dec	4.2 (1)	4.2 (1)	8.3 (2)	4.2 (1)	8.3 (2)	37.5 (9)	8.3 (2)	8.3 (2)	8.3 (2)	8.3 (2)	4.96	8=
7 Adult praise	Aug	7.7 (2)	-	7.7 (2)	15.4 (4)	19.2 (5)	11.5 (3)	15.4 (4)	7.7 (2)	7.7 (2)	7.7 (2)	5.27	7
	Dec	-	20.8 (5)	-	12.5 (3)	8.3 (2)	4.2 (1)	12.5 (3)	25.0 (6)	8.3 (2)	8.3 (2)	4.96	8=
8 Peer tips	Aug	3.8 (1)	11.5 (3)	7.7 (2)	15.4 (4)	7.7 (2)	7.7 (2)	7.7 (2)	11.5 (3)	23.1 (6)	3.8 (1)	5.12	8
	Dec	4.2 (1)	4.2 (1)	20.8 (5)	8.3 (2)	8.3 (2)	4.2 (1)	20.8 (5)	12.5 (3)	8.3 (2)	8.3 (2)	5.21	6
9 Enjoy writing	Aug	11.5 (3)	7.7 (2)	11.5 (3)	7.7 (2)	15.4 (4)	7.7 (2)	7.7 (2)	3.8 (1)	7.7 (2)	19.2 (5)	5.38	6
	Dec	16.7 (4)	8.3 (2)	16.7 (4)	-	8.3 (2)	8.3 (2)	12.5 (3)	8.3 (2)	12.5 (3)	8.3 (2)	5.75	4
10 Volunteer to read	Aug	11.5 (3)	19.2 (5)	3.8 (1)	-	-	15.4 (4)	3.8 (1)	11.5 (3)	3.8 (1)	30.8 (8)	4.85	9
	Dec	20.8 (5)	8.3 (2)	-	8.3 (2)	4.2 (1)	8.3 (2)	8.3 (2)	-	25.0 (6)	16.7 (4)	5.08	7

In comparing the findings, only three motivational factors retained their original ranking from August to December. Most highly rated is 'teacher praise' (1), lowest rated is 'teacher – must do' (3), and in third position is 'teacher tips' (4). Each of these factors demonstrates a decrease (-.31 or -.33) in their weighted means in the twelfth month. However, 'adult praise' (7) has an equivalent means decrease (-.31) yet its ranking dropped one position of motivational importance.

Four ('peer praise' (2), 'peer tips' (8), 'enjoy writing' (9), 'volunteer to read' (10) of the remaining six motivational factors show rankings improve two levels based on a wide spread of increased means between August and December. The largest increase (+.79) occurred in 'peer praise' (8) as it became the second most important motivational factor by the end of the year.

The remaining two factors, 'enjoy topic / want to share ideas' (5) and 'share ideas with peers' (6) are closely connected and both show reductions in their means (-.6 and -.46) as well as dropping three levels in their rankings between August and December.

Other factors

The final part of this section asked participants to identify other motivational factors. By combining the August and December responses that participants provided in the extra space, following are the key ideas that are most often repeated:

- *enjoy writing / want to write stories / want to be an author*
- *movies, pictures, cartoons / comics, television programmes*
- *make family and friends proud*

- *want to do well / get an education*
- *own experiences*
- *read books and stories written by other children*
- *like to use imagination*

Part three – Opposing Pairs

The final section of the questionnaire had the respondents identifying their preference from a pair of opposing ideas. Indicating potential elements of student interest and control, it also considers the effects of peer and self-assessment strategies. Table 4.3 shows the comparative responses from August and December using percentages and raw scores.

In August, each of four opposing pairs ('given' versus 'own' sentence starter, 'discussion' versus 'no discussion', 'small group' versus 'teacher conference' editing, 'reading story' versus 'keeping story to self') are basically split equally by the participants. December findings show that only 'small group versus teacher-group editing' was virtually unchanged while both 'keeping story to self' and 'own sentence starter' show minimal increases (8.3% and 12.5% respectively) and 'discussing story ideas' shows a sizeable increase (20.8%).

With the remaining six opposing pairs, learners show overwhelming support for six ideas ('own topic', 'planning and organising writing', 'writing fantasy stories', 'using own interesting words', 'peer editing', and 'writing different stories'). Come December, two ideas ('own topic' and 'writing different stories') remain basically static

Table 4.3 – Results for opposing pairs

Aug	Dec		Aug	Dec	
65.4 (17)	70.8 (17)	Own topic	34.6 (9)	29.2 (7)	Teacher topic
23.1 (6)	33.3 (8)	Start writing right away	76.9 (20)	66.7 (16)	Plan / organise writing first
50.0 (13)	37.5 (9)	Starter sentence given	50.0 (13)	62.5 (15)	Own starter sentence
23.1 (6)	33.3 (8)	Writing fact stories	76.9 (20)	66.7 (16)	Writing fantasy stories
30.8 (8)	54.2 (13)	Using a thesaurus	69.2 (18)	45.8 (11)	Using own interesting words
50.0 (13)	70.8 (17)	Discuss ideas for story	50.0 (13)	29.2 (7)	No discussion
23.1 (6)	8.3 (2)	Self editing	76.9 (20)	91.7 (22)	Peer editing
46.2 (12)	50.0 (12)	Small group editing	53.8 (14)	50.0 (12)	Teacher conference editing
50.0 (13)	41.7 (10)	Reading story to others	50.0 (13)	58.3 (14)	Keeping story to self
73.1 (19)	70.8 (17)	Writing different stories	26.9 (7)	29.2 (7)	Writing a 'chapter' story

as preferences while 'planning and organising' and 'writing fantasy stories' show minimal drops (10.2% each) and 'using own interesting words' sees a major drop (23.4%). However, 'peer editing' has an increase (14.2%) which sees nearly all participants (91.7%) choosing this as the preferred editing option.

Other factors

Listing other ways that make learners want to write, the August and December responses were amalgamated and the following answers indicate main ideas that were frequently repeated:

- *own experiences*

- *writing with friends*
- *writing plays*
- *ideas from other books / carrying on adventures from other books*
- *want to write / enjoy writing stories / make own book*
- *movies, comics / cartoons, pictures*
- *adding pictures to stories*
- *use imagination*

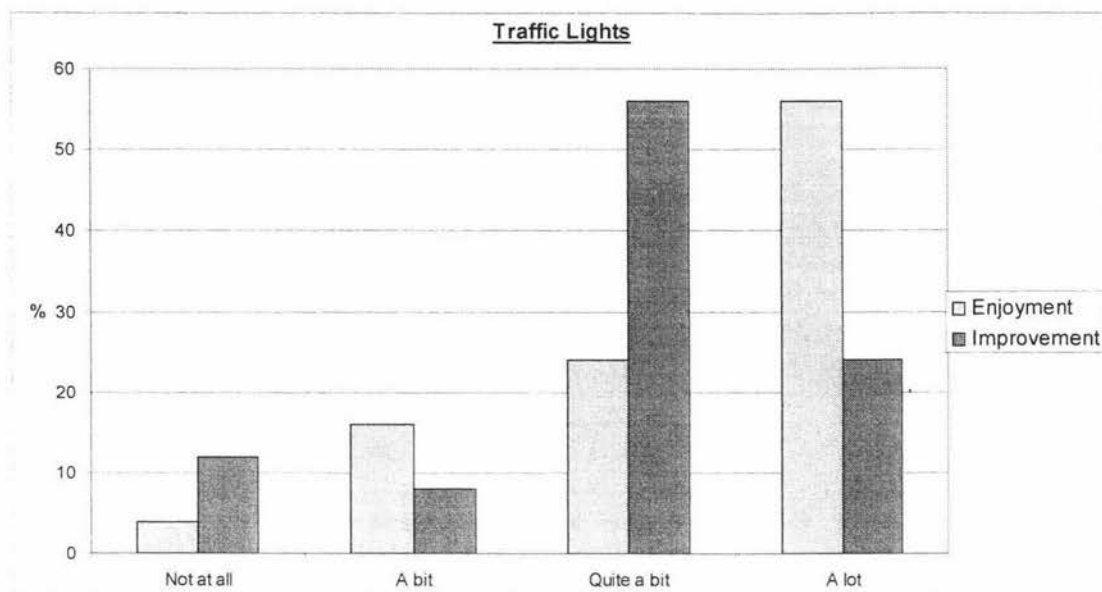
Strategy Evaluation Forms (Appendix 10)

The evaluation or assessment forms allowed participants to reflect on the particular strategies that were being trialled and to give feedback on their effectiveness and enjoyment of use. Each strategy will be analysed separately with a graph showing the levels of responses to the Likert scales, and the recurring themes resulting from the participants expanding and justifying their answers in the provided space.

Traffic Lights

Using the colours of *traffic lights* to indicate their understanding of what is being learnt, proved to be a very popular way of self-assessing with over half the participants (56%) indicating the highest enjoyment level. One quarter (24%) rated it at the next level down while only 4% judged it at the lowest level. Interestingly, in a swap-over of rankings, learners (56%) consider it helps improve story writing 'quite a bit' while one quarter (24%) believes it helps 'a lot'. The majority of remaining participants resigned *traffic lights* to the lowest rating (12%) with the remainder (8%) considering it to be 'a bit' helpful.

Graph 4.1 – Traffic Lights – Enjoyment and Improvement



In the provided space, often repeated comments and ideas include:

- *It tells the teacher I need help.*
- *They're easy to use.*
- *There's no reading or writing.*
- *I like choosing the colour and you can change them if you like.*
- *You get to make your own decisions.*
- *The pieces are easy to lose.*

Other than the potential for losing pieces (or not being able to find them in their messy desks!), concerns also arise:

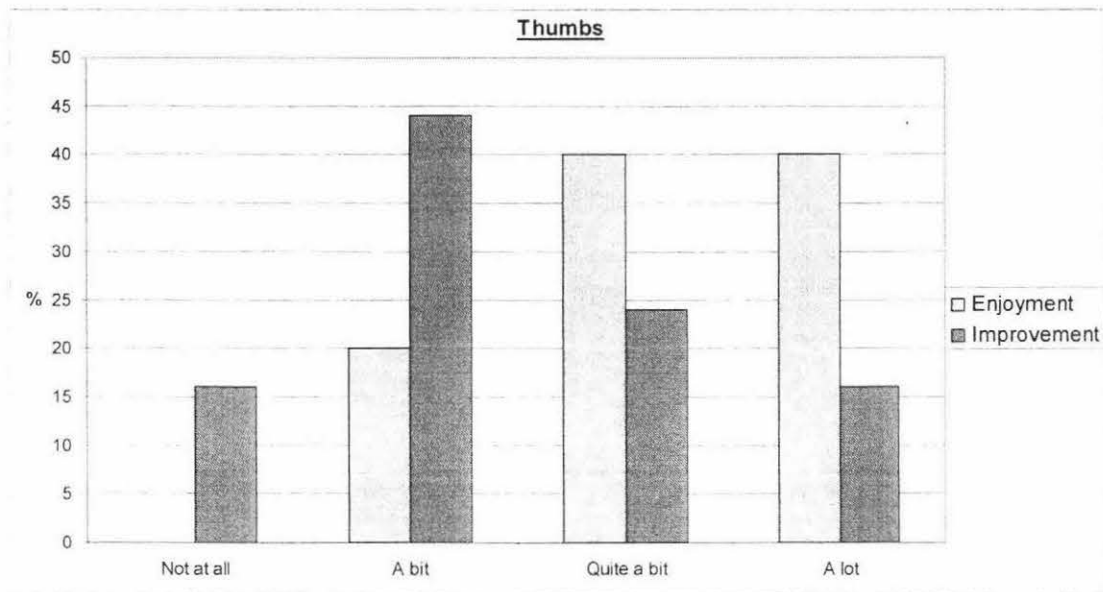
- *If I think I'm doing it right and I'm not doing it right, the teacher will not know.*

Thumbs

The direction the thumb is pointing indicates the learners' feelings and understanding about the work they are doing. It also proved to be an enjoyable strategy to use as there was an even split (40% each) within the two most positive responses and no

responses in the lowest ranking. However, its potential for helping improve story writing had 44% of students rating it 'a bit' with a matching 16% at each extreme of the scale.

Graph 4.2 – Thumbs – Enjoyment and Improvement



Similar to traffic lights, many recurring comments include:

- *I can get the help I need from the teacher and from other kids.*
- *It interrupts me when I'm working and I forget what I'm doing.*
- *I choose where my thumb goes.*
- *I can't lose anything like traffic lights.*

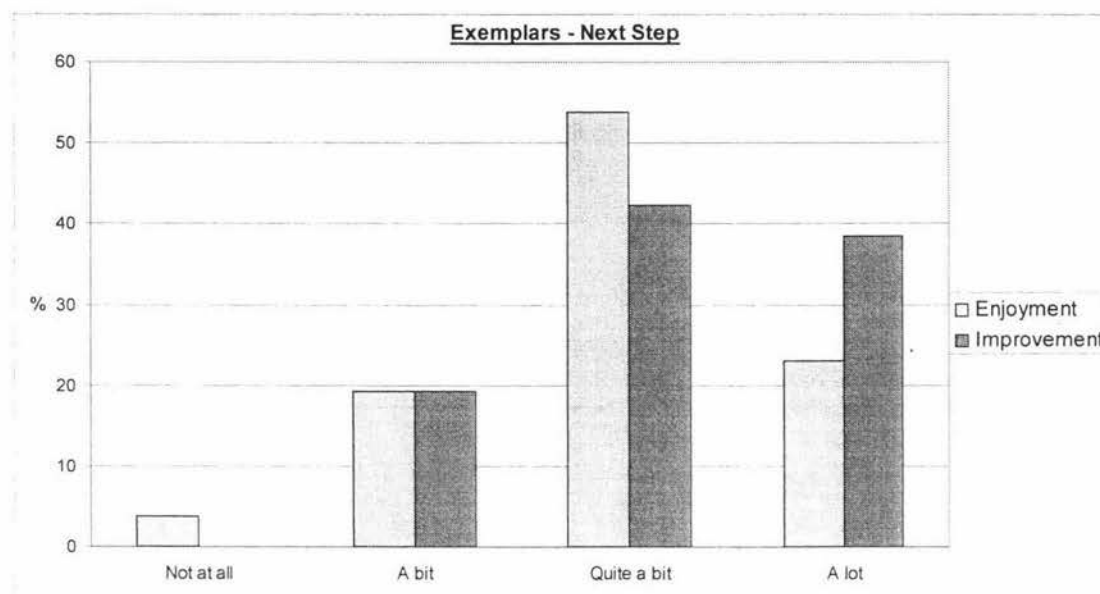
Noted concerns involve the teacher not seeing the thumb so help does not come or that the thumb has to be held up too long.

Exemplars – Next-Step

The *exemplars* (MOE, 2003), work samples produced by New Zealand pupils and annotated with the skills identified on a continuum of surface and deeper features,

allow students to compare their work with a standard, identify their present skills, and their next step learning.

Graph 4.3 – Exemplars – Next Step – Enjoyment and Improvement



The enjoyment ranking peaked at the third quadrant (53.8%) with another quarter (23.1%) of the respondents rating it at the highest level while it only received minimal (3.8%) ratings at the lowest level. In regards to exemplars helping with story writing, once again the replies peaked at 'quite a bit' (42.3%) with slightly less (38.5%) at the highest rating but there were no responses in the lowest sector of the scale.

Repeated comments and themes about the exemplars were:

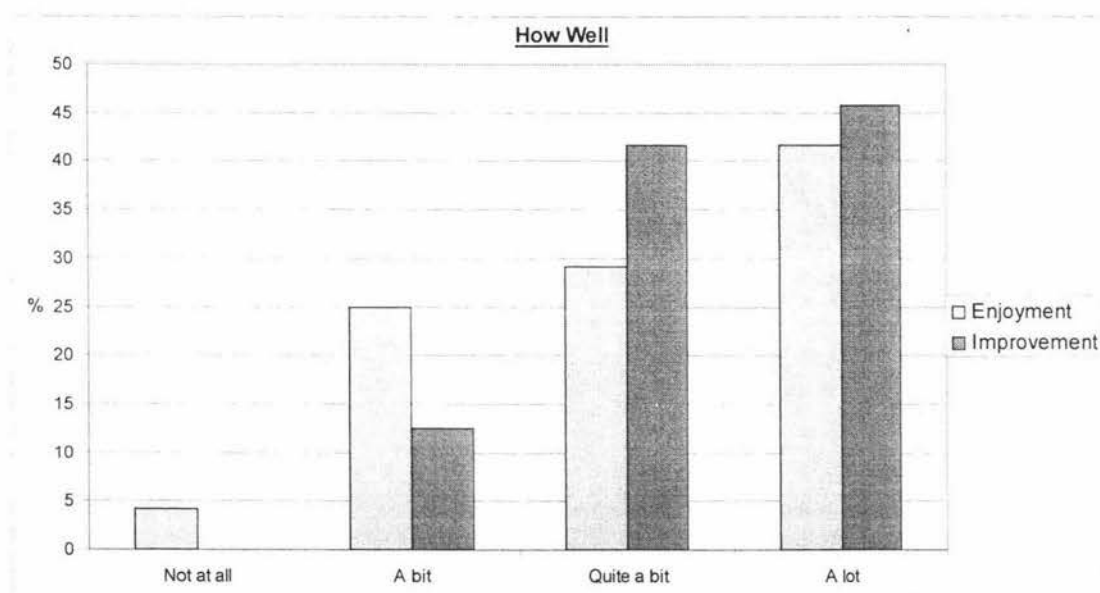
- *It's good to know what I can do and what I have to do.*
- *The deeper features...hard to understand...too many words...*
- *Surface features....words and ideas easy to understand*
- *It's easy to follow.*
- *Makes me learn more stuff.*

- *It encourages me to get my work right by myself.*

How Well (HowI) (Appendix 7)

HowI allows the students to directly assess each other's work against the written success criteria on a four point rating scale (1 – more care, 2 – okay, 3 – good, 4 – very good) determined by the learners. Once the peer assessment is completed, the learners discuss their rating choices and the learners then attempt to improve or make the suggested changes.

Graph 4.4 – How Well – Enjoyment and Improvement



Once again, the majority of participants (41.7%) rated it as highly as possible for enjoyment of use, split fairly evenly (29.2%, 25%) for the next two levels, and minimal (4.2%) non-enjoyment. All respondents rated *HowI* as helping to improve story writing with a basic split in the two highest categories (45.8% and 41.7%) and only 12.5% of learners finding it only slightly helpful.

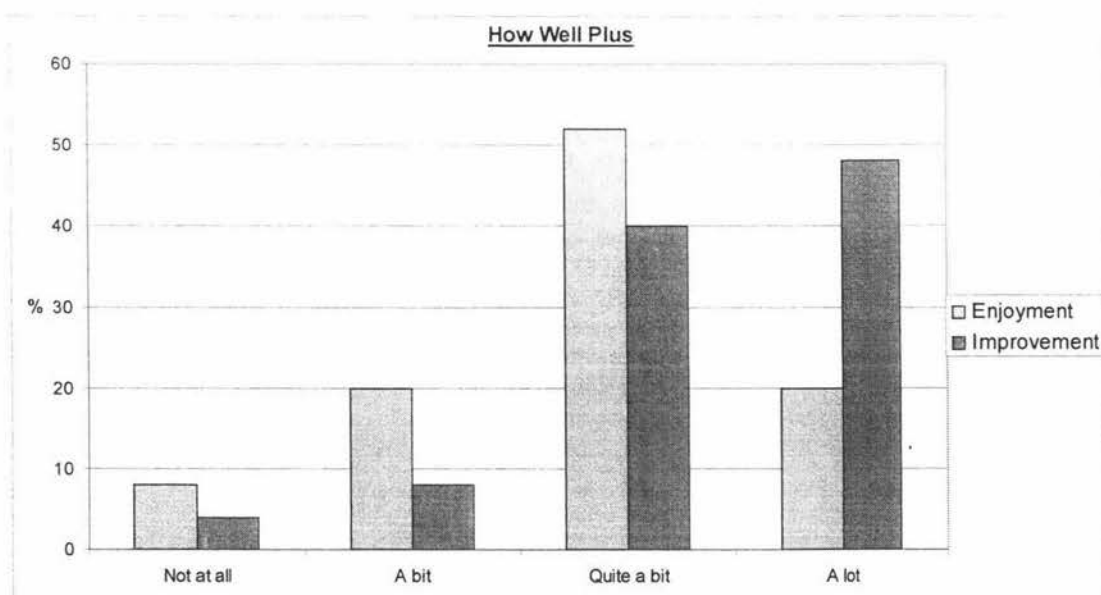
Recurring comments made by the children include:

- *You can get your friend's opinion on how well you have done.*
- *It helps me fix my mistakes.*
- *It tells you where you need to improve.*
- *You get to read other people's stories.*
- *It's fast... its fun...*

How Well Plus (Howl Plus) (Appendix 8)

This strategy is based on its original namesake listed above but with an addition of lines for clarifying, in written form, the rated assessment for the success criteria. Its written form is in support of the verbal discussion between the peers.

Graph 4.5 – How Well Plus – Enjoyment and Improvement



The enjoyment of using *Howl Plus* has just over half of the participants (52%) rating it in the third sector with another 20% in each surrounding level. The remaining 8% did

not enjoy using this strategy while 4% believed it minimally helpful in improving their story writing. However, nearly half (48%) consider *Howl Plus* to rate highly in improving story writing with 40% and 8% in the next levels down.

Recurring comments and ideas regarding this strategy include:

- *The comments are the things I need to improve.*
- *It's good to know what you're good at and what to get better at.*
- *It's good to know what you need to put in your writing.*
- *Work with friends is good...my friends tell me what to do to improve.*
- *There's too much writing...too hard to fill in.*

Teacher Journal – Field Notes / Observations

The field notes and observations are based on the activities occurring within the classroom during the written language sessions (Monday to Thursday, 45 minutes per day just before lunch). As is the usual running of a classroom, things are always extremely busy so opportunities to take notes are often reduced to key words which are then expanded during non-contact time (usually lunch).

Themes and patterns that kept re-emerging within my notes are quite obvious upon reflection. The lessons tend to follow a simple routine of discussing the teacher-determined learning intention so it was clearly understood by all though rarely incorporated into the 'big picture' as to why it needed to be learnt. Next was the setting of the success criteria with both the learning intention and success criteria written on the board (using a scrapbook would have been more efficient!) and also typed onto a piece of paper that was later glued into the students' 'moo' book (MU -

Massey University workbooks). At the beginning, these specifications were set by the teacher but eventually became co-constructed with the students. As the criteria were often used over a period of time, they would be reviewed rather than re-set each time. Depending on the lesson, teacher modelling, think alouds, exemplar examinations or other co-operative activities, focused the learners on what needed to be done. Again, modelling and think alouds were eventually led by the students and were showing improvement as time went on. Had time not been so restricted, more children would have benefited. The writing task or activity, depending on its structure, would then be worked upon individually, in pairs or in small groups. At the conclusion of the working time, peer or self- assessment strategies or reflection were utilised. At first, I would model the self-assessment process using a piece of writing with learners' input progressively integrated. The learners would, using the success criteria as the basis, identify things that were done well and how things that could be improved. Thus, the feedback and feed forward would provide students with a focus for continued improvement but the field notes indicate little time allocated for learners to incorporate those ideas into their work at that time. End of lesson reflection time tended to be a quick recall of success criteria or hurried examples of the criteria as the lunch bell was fast approaching. Again, I needed to provide more time for a thorough reflection of what was to be learnt and the learners' successes or struggles with that lesson. As a class, we would consider how things could be done better or which peer or self- assessment strategy would be best in a particular application.

While the learners worked, I would move around the class giving support where required. Most days, I would take a group of students and work on a specific aspect of the lesson with which they were struggling or which needed extending. How

support was provided depended on the activity's organisation, the assessment strategy being used, 'insider' knowledge of the learners, and upon the students themselves. However, I did recognise that I provided much more verbal, as opposed to written, feedback and feed forward. Although some off task behaviours continued to occur, noted in the field notes was an increasing amount of engagement within activities as this learning process became a regular classroom practice.

Moving away from the lesson itself, repeated observations reveal that the mixed ability groups seemed to work well in developing their work, and supporting members in understanding what needed to be done. Learners would often refer to the success criteria to ensure inclusion of the requirements while most overheard discussions were based on the task with the occasional personal, non-work related conversations.

Participant Workbooks – Artefacts

These workbooks provided not only information regarding individual growth and achievement for school assessment requirements but also data regarding the use of different peer and self- assessment strategies.

Based on the progression of sample work within their 'moo' books, all participants showed an improvement, to varying degrees, in their writing skills. This conclusion is the outcome of student self-assessment comparing work from the beginning and the end of the unit of study. Followed by individual discussions with the teacher, students provided evidence from their work to show achievement in meeting the

success criteria, reflecting on what they had learnt, and what they thought they needed to learn next.

The workbooks also reveal that the participants had a good grasp of using *Howl* and *Howl Plus* as a form of both peer and self- assessment. However, *Traffic Lights* and *Thumbs* were obvious indicators of difficulties during the lesson and activity session but there is no indication of those difficulties within the workbooks. There is also limited written feedback and feed forward in the 'moo' books from the teacher.

Semi-Structured Interviews / Informal Discussions

Where semi-structured interviews were held by the 'researcher' to clarify answers on the questionnaire and evaluation forms, those comments have been incorporated into the data analysis in the appropriate sections as has information and ideas overheard during casual student chats. However, it is the information from an informal class discussion regarding assessment for learning, held at the end of the study, which will be analysed here. It should be stated that prompts were occasionally used to develop responses but there was no conscious directing of answers. Suitably, opinions were indicated using the *Thumbs* strategy.

In general, the vast majority of students liked knowing the learning intention of the lesson though some wanted to set that objective for themselves. Discussions centred on the practitioner setting the goal as they have the knowledge of what needs to be learnt yet students suggested that what they wanted to learn or develop could be a base for teacher planning. This would allow teachers to incorporate learning intentions with student interests.

An overwhelmingly positive response was indicated when asked about the inclusion and usefulness of success criteria in lessons. All students admitted that they liked knowing, specifically, what they had to do and felt it helped them “get things right.” While many felt that the constant repetition of the success criteria was “boring,” others felt it was “good to keep reminding us of what we have to do.” Having it written down and glued into their books was “good because we don’t have to remember everything, its right there.”

The majority of learners preferred co-constructing success criteria rather than getting it pre-set by the teacher. However, some students “got confused” when they “tried to figure out the right answer” especially when they didn’t fully understand the learning intention. Others felt that developing success criteria was “hard because we still have to learn it.” Meanwhile, getting teacher prompts “helped a bit” though another suggestion was, “give us some examples so we can figure it out for ourselves.”

Basically, there was an even three-way split in thumb direction regarding the number of success criteria. Answers ranged from one to six though having them all listed was a “good idea so you can try different ones.” Suggestions to solve this problem included, “do a different one every day,” “assess only on one at a time,” “assess all of them then work on your worst one,” and “everybody working on the same one can work together.”

All students claimed to enjoy working with their friends but wanted “to choose their partner/s all the time.” Their complaints on being paired with someone they hadn’t chosen include, “I don’t like them,” “they’re not smart enough to help me,” “I don’t

trust them to actually help me,” and “I don’t think I’m smart enough to help.” Occasionally, a learner would refuse to work with a particular person and end up working independently. This situation did not arise in small group activities though complaints of team members “not doing anything” did surface.

When asked about doing reflections at the end of a session, most learners’ ‘thumbs’ were pointed down with the remainder pointing to the side. These opinions were justified with: “why say what we’ve learned when we just did the work,” “it’s the success criteria,” “we never have time and then its lunch,” and “why would anybody want to know what I’ve learned.”

No questions were asked about the trialled peer and self- assessment strategies as that information is on the evaluation forms. However, various other comments emerged including, needing “more time to learn things,” “it’s good using kid’s work to assess (modelling),” “some kids surprised me that they could do that stuff,” and “I like there being lots of teachers in the class.” In general, the learners gave a ‘thumbs up’ when they considered the effectiveness of formative assessment helping them learn.

Summary

The various methods of data collection provide a range of information not only on the peer and self- assessment strategies trialled but also on the thinking, beliefs, and reasoning of students in regards to written language and formative assessment structures. The triangulation of data provides an in-depth basis for answering the research questions that underlie this entire research project which will be explored and discussed in more depth in the next chapter.

Chapter 5 - Discussion

Introduction

This chapter will take the data analysis and discuss the findings further as well as link it in more closely with the literature and the research questions.

The organisation of this chapter will revolve around each of the research questions. The four sub-questions will act as the focal point with findings and literature relevant to answering the question being examined. The main question, which connects the sub-questions together, will be the final area of discussion. As the ideas and themes of this research are inextricably linked, it should be recognised that some of these findings will relate to more than one of the research questions. These concepts will be acknowledged and developed where appropriate.

Research Questions and Discussions

Sub-question 1 - Which strategies are effective in developing peer and self-assessment skills within this class?

This question can be considered from two different approaches as it alludes to a double meaning in its answer. On one hand, it could refer to the formative assessment structures that need to be in place to support the development of peer and self- assessment. On the other hand, it evokes ideas of teaching approaches that can be used to develop peer and self- assessment skills. To alleviate any possible confusion both perspectives will be considered.

The fundamental principles of formative assessment established by the Assessment Reform Group (1999) based on Black and Wiliam's work are:

- learning intentions shared with students
- involving learners in self-assessment
- providing feedback and feed forward for next step learning
- the belief that each learner can improve

With these structures in mind, learning intentions and their associated success criteria are prerequisites to developing formal peer and self- assessment processes as they function as the basis for the learning, feedback, and assessment (Clarke, Timperley, & Hattie, 2003). The idea that each learner can improve needs to be believed by both the teacher and the students as it has a major impact on achievement and motivation (Absolum, 2006; Alderman, 2004; Harlen, 2006).

Learning intentions and the associated success criteria, functioning as the foundation for peer and self- assessment, provide the 'what' and 'how' of the lesson (Clarke, 1998). Learning intentions focus the students on what they need to learn while success criteria provide guidance on how success or achievement will be measured.

In this study, learning intentions were pre-set by the teacher, based on the needs of the students, and then integrated into the topic of study. This corresponds with the need to have the purpose of the lesson identified within the planning stage of the teaching process (Rayment, 2006). In the class discussion held at the end of the study, the vast majority of students liked knowing the learning intention as it gave a focus for their learning but many wanted to set that objective for themselves. Their argument centred on using practitioner knowledge of student learning needs but also

using student interests for setting the learning. Not only does the idea of incorporating the two factors presents exciting possibilities but this dialogue also shows a high level of interest in their learning. Another indicator of an increased interest in learning is the escalating percentages in the questionnaire (opposing pairs section) between August and December. These findings indicate students are choosing independent or peer activities over teacher involved activities (e.g. 'own topic' 70.8%, 'own sentence starter' 62.5%, 'discussing ideas for story' 70.8%, 'peer editing' 91.7%). This links to research (Harlen, 2006; Stipek, 2002) suggesting that topics of personal interest increase student motivation by influencing attentiveness, perseverance, with knowledge and skills development processed to a deeper level.

Using the findings from the class discussion, the inclusion of success criteria was overwhelmingly popular as the children liked knowing what they had to do and how to "get things right." Originally pre-set by the teacher, the criteria eventually became an outcome from a process of co-construction. This collaborative activity was highly favoured during the discussion which correlates closely to the constructivist idea of constructing knowledge based on the interplay between individual and group learning (Gagnon & Collay, 2006). Developing a shared sense of what counts as 'good' work supports learners' development of peer and self- assessment strategies and abilities (Hall & Burke, 2003). The following comments regarding success criteria are gained from the evaluation forms and the class discussion:

- *It's good to know what you need to put in your writing.*
- *You look at your success criteria and you know what you can do.*
- *It's good (having it written down and glued into their books) because we don't have to remember everything.*

- *Good to keep reminding us of what we have to do.*
- *Going over them all the time is boring.*
- *It's easy to understand the success criteria.*
- *I think about what I have to write so I use the success criteria.*

Though some children found the repeated focus on success criteria boring, research (Black & Wiliam, 1998; Clarke, Timperley, & Hattie, 2003) indicates that highly visible learning intentions and success criteria enhance verbal understandings as learners are able to continually refer to the lesson's purpose and their specific responsibilities for achievement.

However, some learners struggled with the concept of collectively developing success criteria as comments like, "how can we know, we still have to learn it," were voiced during the class discussion. The formation of new knowledge starts from each individual's prior knowledge being developed and re-structured within a social process yet some learners did not have the prior knowledge to build upon. To support these pupils, student suggestions included getting "teacher prompts or ideas," "friends to help," and "give us some examples so we can figure it out for ourselves." Again, the learners are looking beyond the teacher for other sources of support (Sebba, 2006) while also using problem-solving skills to find alternative ways to solve problems (Absolum, 2006). Other data supporting these ideas are evident in the strategy evaluation forms and class discussion as statements like:

- *I can get the help I need from the teacher and from other kids.*
- *I like there being lots of teachers in the class.*
- *Friends can help me if I'm having problems.*
- *I don't like assessing. It's too hard and I don't get partners I want.*

Clarke (1998) argues that success criteria not only provide measures for success but are inclusive of all students as they are specific to the different needs and stages of the learners. If this is truly the case, how can the lack of prior knowledge be incorporated into the co-construction of the criteria as other than an immediate or future teaching point?

The shared practices of peer assessment is a vital stimulus for self-assessment which is essential to learning (Assessment Reform Group, 2002; Black & Wiliam, 1998; Sadler, 1998) but it also helps learners to develop the impartiality needed for proficient self-assessment by supplying an idea of quality within a specific context and motivation to improve (Black, Harrison, Lee, Marshall, & Wiliam, 2003). Sustaining this idea of peer support in learning is the data collected by the various tools used in this research project that highlights the social aspect of learning and the enjoyment learners have of working with their friends. As a class, a shared understanding develops through the co-construction of success criteria so activities have the same basis for the assessment of success. This is evident as:

- in the pupils' 'moo' books, learners used *How Well* and *How Well Plus* as a way of peer self-assessment that eventually became a self-assessment tool used competently by most individuals
- the ordering / ranking part of the questionnaire where both 'peer praise' and 'peer tips' increased two ranking levels between August and December although 'sharing ideas with peers' dropped three ranking levels
- the numerous comments on the strategy evaluation forms that are similar to the following:

- *It's good having friends tell you what you're good at and what you're not.*
- *You find out what your friends think about your work.*
- *They think different and I don't agree on what they say.*

Feedback is directly linked to peer assessment which, by default, is directly linked to developing self-assessment as noted above. The student produced work provides the basis for assessment against the success criteria. Feedback is a powerful mechanism for enhancing achievement (Hattie, 1992, cited in Clarke, 2003) and has been done informally by students (Race, Brown, & Smith, 2005) but is now being done 'formally' through formative assessment. Although Absolum (2006) argues that it is the various perspectives provided by the peers that provide insights into understanding the intended learning, feedback can take the form of prompts or reflection but all work to enhance learning and provide direction for next step learning. Again, many of the comments already provided in this and the previous chapter show the positive perceptions the learners have regarding feedback. Feedback as next step learning can be identified within the following comments taken off the strategy evaluation forms:

- *I like telling people what to improve on.*
- *Some things I have done right, they say I have done wrong.*
- *You know what you did right and what you did wrong.*

Feedback to next step learning in relation to the exemplars will be examined in sub-question 4 as it is specifically centred on the Exemplars.

The belief that each learner can improve impacts on motivation and achievement and is communicated in a variety of ways by both the teacher and students (Alderman, 2004). In developing student self-esteem and confidence in learning, independence and expectations of success will rise. Findings from the data collected in the questionnaire (part one - ability) regarding perceived abilities in written language show little change in the weighted means though the percentages show students' strong beliefs in their ability to use the particular skills. Information collected from the class discussion and on the strategy evaluation forms include both positive and negative comments including:

- *They're not smart enough to help me.*
- *I don't trust them to actually help me.*
- *I get the help I need from...other kids.*
- *I don't think I'm smart enough to help.*
- *Why would anybody want to know what I've learned?*
- *Some kids surprised me that they could do that stuff.*

Admittedly, these quotes do not include the number of children making the comments. Regardless, the potentially damaging comments will result in negative responses because the comments have threatened the students' self-worth (Covington, 1998, cited in Alderman, 2004).

The second part of this answer revolves around teaching approaches used to develop peer and self- assessment strategies. Within this study, modelling, think alouds, scaffolding, discussions, reflections, prompts, questioning, co-construction, exemplars, and co-operative group activities were all employed, whether singularly or in combination, to develop peer and self- assessment skills and strategies.

Regardless of the methods used, it is the co-construction; the developing of a shared sense and understanding of the process itself and how it would support the learners' development of peer and self- assessment strategies and abilities (Hall & Burke, 2003) that is essential. This collaborative or shared responsibility for learning co-ordinates the motivation and support provided by the teacher with the learners, employing their own motivational factors and prior knowledge, to find solutions specific to their learning needs (Absolum, 2006; Black, Harrison, Lee, Marshall, & William, 2002).

To achieve this shared responsibility for learning, the field notes detail the learning process beginning with the strategy being explicitly taught or demonstrated (modelled) by the teacher to provide an example of what pupils should be learning and how it can be attained (Clarke, 1998). While modelling, thinking is verbalised ('think alouds') so the learners become aware of the reasoning and the purposes of the actions. This can then facilitate questions and discussions or allow the teacher to prompt students' thinking about their prior knowledge, possible next step learning or alternative ideas. Conversely, reflections, done during or at the end of the process, can clarify any confusion or strengthen understandings at that time (Absolum, 2006).

These vicarious learning experiences are used to cultivate an understanding and self-efficacy of the process (Bandura, 1996, cited in Stipek, 2002) as learners are scaffolded or encouraged to participate in the process so it becomes actual experiences. As learners gain in confidence and understanding, they are more prepared to share ideas, make suggestions and eventually lead the process itself (Gagnon & Collay, 2006). Thus, the co-construction of the work (knowing what is

'good' or exemplar) and process (how to do it correctly and well) allow for shared understandings to further develop as well as to strengthen and develop proficiency in peer and self- assessment.

This progression from observer to participant to leader is evident in the field notes in the teacher journal. The more academically able students became eager, at an early stage, to share their ideas for success criteria once the process was modelled and understood. Eventually, with further modelling (peer and teacher), prompts, and support, the struggling learners would also help to co-construct the criteria for our lessons. Field notes indicate that this pattern of behaviour, developing confidence and self-efficacy through modelling and scaffolding, was identified in attempting other peer and self- assessment activities, such as using '*How Well*', '*How Well Plus*', and '*Exemplars – Next-Step*'. Observations in the teacher journal identified modelling and think alouds occurring in peer work and assessment as one child would try to explain their thinking to the other.

As it is common practice to employ more than one teaching strategy at a time, there is no way to differentiate which approach is more effective than another. However, their effectiveness in developing students' peer and self- assessment strategies and skills is evident as learners developed and used a variety of formative assessment structures.

Looking at the effectiveness of the different formative assessment structures in developing peer and self- assessment strategies provides plenty of encouragement and exciting possibilities. In particular, the use of learning intentions and specific

success criteria are vital in developing peer and self- assessment strategies and skills as they supply the learning focus and measures of success. Co-constructing success criteria is especially valuable yet the lack of prior knowledge or student experience can make the co-constructing process more challenging. Success criteria also provide the basis for feedback which not only directs and enhances present learning but also next step learning. Feedback from peers is particularly influential, thus, employing peer assessment to develop self-assessment, is imperative. There does need a caution here as not all students believe all learners can improve so limiting or eliminating the potential damage to self-esteem and confidence from peer comments is essential.

Sub-question 2 - Which peer and self- assessment strategies are effective in raising student achievement in written language?

Due to the time constraints of this study, trialling the peer and self- assessment strategies over an extended period was not an option. However, peer and self- assessment strategies can be identified as affecting achievement though the extent to which each of these individual strategies impacts cannot be separated. Regardless, the summative assessment results gained for both school assessment requirements and this project indicate achievements in written language were gained, to various extents, by each learner.

It is the learning intention and related success criteria that the learners assess their work against which not only provides clear guidance for achievement, evidence for feedback, but also next step learning (Black, Harrison, Lee, Marshall, & Wiliam, 2002). In this case, a lot of data from the field notes and strategy evaluation forms

regarding the effectiveness of learning intentions and success criteria on student learning was identified within the previous question. Students' declarations that knowing the success criteria help them "get things right" and remind them of the things that they need to do in regards to their learning supports research stating that learners who understand how their work will be judged become more capable and dedicated learners as they develop their evaluative skills, produce higher standards of work, build ownership of the assessment process and, ultimately, control over their own learning (Black et al.).

Strategies trialled during this study were *Traffic Lights*, *Thumbs*, *How Well*, *How Well Plus*, and *Exemplars – Next-Step*. Although the data collected on the individual strategy evaluation forms indicated specific feelings or beliefs about that specific strategy, there are some general ideas that can be identified across the findings. Of the four levels of rating, all strategies gained their majority of ratings in the two highest levels in regards to enjoyment of use. This trend is also evident in regards to the perceived value of the strategy in helping to improve story writing with the exception of *Thumbs*. Thus, the enjoyment and perceived value associated with using these strategies, in theory, agrees with Black and Wiliam's (1998) findings mentioned above.

Following are a few of the comments written by the participants that tie the *Traffic Lights* strategy to the principles of formative assessment:

- *I tell the teacher how I'm doing so I can get help when I need it.*
- *You make your own decisions.*
- *Friends can help me if I'm having problems.*

- *I know when I really have to try harder to get it right.*
- *It's your judgement; you know when you need help.*
- *I like choosing the colour and you can change them if you like.*

These and many of the other comments link to the students' own judgements about how they are progressing against the success criteria and that help is available from their peers as well as the teacher (Sebba, 2006). The ease of use, the opportunity to get help for their specific needs rather than general support, and the ability to change colours as understanding develops also support the aims of assessment for learning.

Most of the comments regarding the *Traffic Lights* strategy are repeated in *Thumbs* including a few comments regarding the potential for embarrassment or negative comments as learners 'publicly' display their level of confidence with the work with either their thumb or their coloured traffic light. The remarks range in level of possible embarrassment but it indicates that students vary in their beliefs that this classroom is a safe, non-threatening environment for learning and achievement (Harlen, 2006).

One major difference noted with these two strategies is the 'disruption' factor. *Traffic Lights* are and can be displayed for an extended period on the desk tops whereas *Thumbs* was a less 'permanent' display which is more easily missed by the teacher as recognised by student comments on the evaluation forms (e.g. "...interrupts me when I'm writing and I forget what I'm doing..." and "...even if I have my thumb down the teacher doesn't always see it or come and help me.").

The evaluative comments on *How Well* mainly centre on the aspect of peer support and next step learning:

- *You get your friends' opinion on how well you have done... it's not just what you think of your work.*
- *Easy way to mark people's work.*
- *(When another person assesses it) tells you where you need to improve.... have to put extra effort into.... what you do well.*
- *Helps me to know what to do next time.*
- *I get heaps of help in my stories I write.*

These comments tie into the learners' awareness of present learning with direction to their future learning (Absolum, 2006; Black, Harrison, Lee, Marshall, & Wiliam, 2002; James, 2006) with developing ownership of the learning process and what is learnt being a crucial factor in effective learning.

The social nature of learning is also evident within these comments as using peer assessment strategies to implement formative assessment acts as a stimulus for self-assessment but it is also peers supporting each other in their learning by providing feedback, both formally and informally, which is often more valued than that from teachers (Black & Wiliam, 1998; Sadler, 1998; Assessment Reform Group, 2002). This communal learning also ties into the constructivist learning theories which consider that personal and interpersonal interactions construct knowledge through a shared social reality (Gagnon & Collay, 2006).

Comments about the *Howl Plus* strategy also centre on both the social aspect of learning and on the assessment of their work with direction to next step learning.

Many remarks considered the more specific feedback supplied through this method though concerns also arise:

- *Gives specific things I do well by my friends.*
- *I like telling people what to improve on.*
- *Friends give me good information.*
- *Too hard to understand.*
- *Can't figure it out so it can't help.*

Some learners found it difficult to make their feedback more specific even though it remained linked to the success criteria. Although developing peer and self-assessment skills is a progressive process starting from using simple assessment strategies advancing to more difficult ones, more time may have been needed as is suggested with this strategy. Obviously, the literacy level to which the learners are working will also influence their level of capabilities. Even though the success criteria cater to all levels of needs and stages (Clarke, 1998), assessing a peer working at a higher academic level may pose problems. This idea was also identified in our class discussion with "I don't think I'm smart enough to help," matched with "They're not smart enough to help me." There was also a concern surrounding some people not providing the necessary or appropriate help. These problem come back to building a safe learning environment where everyone, not just the teacher, has the expectation that all students can improve so confidence and self-esteem can be fostered (Absolum, 2006; Hall & Burke, 2003; Harlen, 2006) but also an awareness of potential risks with peer assessment (Black & Wiliam, 2006; Rayment, 2006) and the reciprocity of the learning relationship (Black & Wiliam, 1998; Sadler, 1998).

Problems surfaced immediately with the *Exemplars – Next-Step* as reading levels impeded potential progress and understanding not just of the exemplars (MOE, 2003) themselves but also of the ‘kid speak’ progressive skills continuum. Numerous remarks focus on the difficulty of understanding the concepts and words yet acknowledging the format of the continuum as being clear. Other comments, regarding both aspects of this strategy, hint at a developing confidence in self-assessment include:

- *I want to see me get better and cross off things on the list.* (continuum)
- *I need less teacher help because I know what I have to do.*
- *Its fun doing work and knowing what I need to do.*
- *You know more – how to do things and what more I need to learn.*

Although the exemplars are useful for providing examples of what needs to be done, the continuum would have been better if, as a class, we co-constructed it into ‘kids speak’ so our shared responsibility for learning would ensure a shared understanding of the matrices (Hall & Burke, 2003).

Collectively, the peer and self-assessment strategies trialled in this research resulted in students achieving and making academic progress. Students, in general, enjoyed using the different strategies and recognised their potential to develop their writing skills. However, students also divulged concerns around the potential for ‘public’ embarrassment in admitting, through *Thumbs* or *Traffic Lights*, their level of self-efficacy. Another matter that became apparent was the level of the students’ literacy skills of reading, handwriting, spelling, and handwriting directly affected the use of strategies.

Sub-question 3 - How do different peer and self- assessment strategies affect the motivation and achievement of non-motivated, underachieving learners compared to motivated, achieving learners?

The findings discussed in sub-question 2 are, in many ways, linked to the findings for this question. Looking at the specific strategies trialled, there is a distinct separation between the non-motivated, underachieving learners compared to the motivated and achieving learners. It should be noted here that learning is an inherent activity that occurs when students encounter experiences that differ from their present understandings (James, 2006; Wiseman & Hunt, 2001) and is dependent on the interaction of several motivational factors (Harlen, 2006). So, it is not an absence of motivation but rather low levels of motivation so the term 'non-motivated' is a misnomer and will be replaced with 'modestly motivated'.

All the learners were equivalent when it came to using the strategies requiring a more visual than written expression (*Traffic Lights, Thumbs, How Well*) in that they could all competently manage these self-assessment strategies without support, regardless of academic ability. Using '*How*' as a peer assessment presented few difficulties as the success criteria had been read, discussed, reviewed, and reflected upon on numerous occasions so the learners were well aware of the meanings. However, there was a definite split from that point on.

Right from the start, it was evident from observing the happenings in class that the struggling learners preferred using the strategies that required less reading and writing (*Traffic Lights, Thumbs, How Well*) as many of them were overwhelmed with what they perceived as large amounts of reading in some of the strategies (even

when adult and peer support was provided). They also tended to labour over writing down their peer assessments though they could discuss and clearly explain their ideas with their peers. Some of their revealing comments regarding the 'harder' strategies include:

- *It's hard to understand. There are too many words.*
- *Hard to understand the words and ideas.*
- *Too hard; I can't read it.*
- *I can't figure it out so it can't help me.*
- *I don't like assessing. It's too hard and I don't get partners I want.*

These comments indicate students who lack confidence in their abilities yet many identify the usefulness of success criteria ("It's useful having success criteria to tell me what to put in my writing.") as support and guidance in their learning which correlates to research in this area (Black & Wiliam, 1998; Clarke, Timperley, & Hattie, 2003). They enjoy working with their peers ("Working with your friends is good.") but worry that they may get partners beyond their perceived capabilities to help and some who are not fully prepared to help them. So, the reciprocal relationship in peer assessment can become a potential risk (Rayment, 2006).

Most of these learners have some motivation to learn but the challenges of learning make achievements hard to attain. These learners seem directed to the present learning with little consideration for their next step learning. This is not overly surprising when one considers the struggles they endure to learn 'this step' let alone the next. Possible negative consequences of past learning experiences have caused them to take an avoidance approach to their learning (Elliott, Hufton, Willis & Illushin,

2005) though, hopefully, using and developing their formative assessment structures will change that perspective (Schunk, 1996) and develop their self-efficacy.

Conversely, it was the higher achieving and more highly motivated students who preferred the more specific or detailed assessment strategies (*How Well Plus and Exemplars – Next-Step*). Their comments highlight their growing confidence and independence in their abilities to learn in attempting new learning with minimal teacher support:

- *It's fun to learn new things.*
- *Encourages me to get my work right by myself.*
- *It starts making me get better and better by learning the stuff I don't know.*
- *Encourages me to get to the next level and makes me want to learn the different things so I can get there.*

This signifies an increasing motivation to learn with strengthening mastery goal orientations and a positive expectancy x value motivational framework. It is also showing an internalised locus of control, increased self-esteem and self-efficacy, and developing self-regulation. The comments, beliefs, and accompanying behaviours reveal students who are intrinsically motivated to learn.

There is a general split between the motivated, achieving learners and the modestly motivated, underachieving learners in regards to the affects of the trialled peer and self-assessment strategies on motivation and achievement. The more advanced and specific the strategy for assessment and next step learning, the more challenged and motivated the higher achievers became to learn. Conversely, the underachievers would become overwhelmed and make little effort to meet the challenge, often

because their literacy skills were not up to that standard. Equally, the modestly motivated pupils were motivated and actively involved in their learning and assessment when utilising the simpler strategies that required little or no writing or reading yet the higher achievers put in the minimal effort with seemingly little regard for the results (beyond listening to what their partner said).

Sub-question 4 - How effective are the Ministry of Education exemplars in meeting the various learning needs within my primary classroom?

The majority of children rated both the enjoyment of use and perceived ability to help them improve their writing in the higher rating levels of the Likert scale on the evaluation forms. However, the exemplars proved both successful and unsuccessful in meeting the various learning needs of the students within my primary classroom. This is apparent in the wide spread of comments on the strategy evaluation forms regarding the exemplars. Following are often repeated ideas from the motivated, achieving learners:

- *I like knowing what to do next.*
- *Things get harder so you push yourself harder. I'd probably take up the challenge.*
- *Seems easy to figure out what I have to do next.*
- *I'm moving towards a different level and it tells me where I'm going to be getting and what I need to do to get to another level.*
- *I know I'm here and stuff and I can see where I have to go to the others.*
- *I can self-teach next step with support.*

The exemplars were successful in meeting the needs of the more motivated, higher achieving learners by providing examples of good work with notations providing

evidence of success that these learners were prepared and encouraged to take the challenge of improving their work. Their comments listed above, and the various teacher observed behaviours over the trial period showed an increased proficiency of students comparing their work against the exemplars, checking with peers that they're 'doing it right,' showing evidence of criteria inclusion. As well as overheard conversations about solving different issues within the work all indicate a mastery goal orientation (Alderman, 2004; Brophy, 1998; Harlen, 2006; Stipek, 2002). These students liked to know what they could do, how well they could do it, and what they needed to be doing next. These learning behaviours indicate intrinsic motivation but also help to develop an internalised locus of control self-efficacy and self-regulation skills as they became more proficient at using peer and self- assessment skills against the exemplars (Harlen, 2006). Discussions about deeper features were often held between students to ensure understanding while surface features appeared to be part of what these learners already did in their work.

In contrast, the modestly motivated, underachieving learners comments are much less encouraging:

- *It's too hard to understand.*
- *Too many words.*
- *I don't like it.*
- *(Deeper features) It's hard to understand words and ideas; not clear.*
- *Don't understand all the words.*
- *I don't understand how it works.*

My concerns with the exemplars arise with my students who struggle with their learning. Admittedly, there were some extreme learners (one working at a pre-

emergent level, five working at pre- or very basic level 1i) in this group. Working with this group of learners, many of them felt overwhelmed with the amount of writing or not understanding what was written even when support, adult or peer, was provided. They liked looking at other students' work but would tend to negatively compare their work to the samples which, on occasion, would digress into negative personal speculations. This obviously impacts upon their self-esteem or self-worth (Covington, 1992, cited in Alderman, 2004) as these learners often needed somebody to point out their writing successes and achievements while 'gently' encouraging them to look at their next step learning. The behaviour of these pupils denotes a performance goal orientation (Harlen, 2006; Stipek, 2002; Alderman, 2004) with an avoidance perspective (Elliott, Hufton, Willis & Illushin, 2005). With their sense of frustration and lack of ability, their self-efficacy was low but all were prepared to put in some effort if adult support was immediately available.

The majority of participants enjoy using this strategy (*Exemplars – Next-Step*) and believe it to be helpful in improving their writing (see Graph 4.3). In the questionnaire (part one), the percentages show the students' strong beliefs in their ability to actually use punctuation, description, and organisational skills and the weighted means show little change in students' perceived abilities between August and December. However, the wide diversity of learning needs within this class is reflected in the understanding and application of the exemplars within the written language context.

IN WRITTEN LANGUAGE, WHAT EFFECTS DO USING THE FORMATIVE ASSESSMENT STRUCTURES OF PEER AND SELF- ASSESSMENT HAVE ON THE MOTIVATION AND ACHIEVEMENT OF LEARNERS?

As discussed in the sub-questions, formative assessment structures, particularly peer and self- assessment, have had a generally positive effect on learner motivation and achievement. As this question acts an overarching cover to the sub-questions, many of the ideas previously discussed and supported with data and literature will reappear but will not be developed further unless warranted.

Enveloping formative assessment structures into a written language context where writing is inherently linked to formal education and must be explicitly taught (Leki, 1992, cited in Weigle, 2002) is a logical alignment as the intention of the formative assessment process is to provide students with the skills, knowledge, and strategies to be motivated, active learners who can self-manage their own learning with support and guidance from the teacher and their peers (Black & Wiliam, 1998).

There was an increased awareness of the important connection between reading and writing identified in the questionnaire data (see Table 4.1d) and that correlates to research (Hayes, 1996, cited in Weigle, 2002). The data also indicates that spelling and handwriting are considered important factors (see Table 4.1c) by the learners which Graham, Berninger, Abbott, Abbott, and Whitaker (1997, cited in Baker, Gersten & Graham, 2003) consider has a significant impact on the variability in writing.

The shift from studying the mechanics of writing to improving the content and organisation (Baker, Gersten, & Graham, 2003; Weigle, 2006) suggests that the use of procedural facilitators, in this case POWER (Englert, Raphael, Anderson, Anthony & Stevens, 1991, cited in Baker, Gersten & Graham, 2003), is valuable in developing

writing strategies and processes focused on planning, organising, writing, editing, and revising. Not only did POWER provide the learners with a framework for their writing but they also enjoyed using it as several comments were made on the strategy evaluation forms and in informal discussions. Results from the questionnaire substantiate these findings for both enjoyment and importance of both planning and organising, and editing and revising (see Table 4.1c) scored highly on the Likert scales.

It was also stated (sub-question 2) that all learners showed an improvement, to varying degrees, in their writing skills. This summative assessment is based on the samples of work produced in the participants' 'moo' workbooks. A progression could be seen not only in the work produced but also in the use and development of peer and self- assessment strategies. As the writing work was centred on using the formative assessment structures as a support guide for learning, progress must, to some degree, be attributed to those factors. This ties into Black and William's (1998) research that shows academic achievement occurs when formative assessment strategies are utilised.

In regards to student motivation, the assessment for learning structures and principles encourage students to take an active part in their learning and this can be seen in many areas as comments on the evaluation forms, changes in questionnaire results which saw ranking increases in getting 'peer praise' and 'peer tips.' The social nature of formative assessment is also a motivating factor as learners support each other in their learning based on the co-constructed success criteria of the learning intention. Repeatedly mentioned in the evaluation forms and during

discussions was how pupils enjoyed working with their friends, getting and giving feedback, and figuring out their next step learning. There were some issues regarding the reciprocity of this peer relationship when students of diverse achievement levels worked together in pairs. This disparity was lessened within mixed ability groups.

Increased motivation and independence could also be inferred from the results of the 'opposing pairs' section of the questionnaire. Activities that are 'teacher controlled' were less likely to be chosen compared to peer or self activities. In almost every case, there was an increase between the two months indicating a preference for independent or peer based activities. This growth in confidence, independence, and associated applied effort relates to Harlen's (2006) belief that developing student knowledge and understanding of how learning contexts and conditions, especially assessment, influence their motivation and effort to learn.

A result within the questionnaire that is somewhat contradictory to the formative assessment ideal is that 'teacher praise' remains the highest ranked motivational factor. Admittedly, relationship-based teaching is a focus within our school and has shown to be hugely beneficial for all involved as student behaviours have greatly improved. As a result, teaching requires less behaviour management so more teaching / learning can take place in a safe environment. Formative assessment encourages students to look beyond the teacher as the single or main source of support (Sebba, 2006; Black & Wiliam, 1998) which, in fact, the participants are starting to do, slowly. Perhaps, with more time to develop the necessary skills, strategies, and confidence, 'teacher praise' may not get rated so highly.

Another consideration in motivation is the use of different peer assessment strategies. Where students struggled with their learning, the more advanced or difficult assessment methods (*How Well Plus* and *Exemplars – Next-Step*) seemed to overwhelm them and quash their motivation and confidence to achieve. Their comments revolved around being unable to understand the words and ideas often because they were intimidated by the number of words. In contrast, higher achievers took up this challenge and were encouraged and motivated to achieve for themselves. Conversely, these more motivated learners felt that the other peer and self- assessment strategies trialled (*Traffic Lights*, *Thumbs*, and *How Well*) were fun to use and potentially useful for advancing their writing skills, yet many commented on the evaluation forms that they lacked detail and didn't provide information or ideas for next step learning. It was the lack of writing and reading that attracted the lower achievers as they believed they could employ these strategies as well as any of the other students. Research (Black & Wiliam, 1998; Clarke, Timperley, & Hattie, 2003; Hounsell, 1997; Norton, 1990, both cited in Nicol & Macfarlane-Dick, 2006) shows that the use of formative assessment strategies are particularly helpful in raising achievement levels for students who experience difficulty in their learning yet, in this case, some students became overwhelmed and lost confidence in their ability and themselves when attempting to employ some advanced assessment strategies. Although consideration will need to be given to this matter, other aspects (especially co-constructed success criteria) of formative assessment were useful in raising their awareness of their learning and their ability to achieve.

Summary

In this chapter, an attempt to link the collected data and current literature to the research questions has been made. Because of the overlap of ideas and beliefs, recurring themes can be identified within the different questions that form the basis of this research. The social nature of education is an important aspect of formative assessment strategies and one that is keenly enjoyed by the learners as both a motivating factor and as an educational support. As a collective, the co-construction of a social reality or a shared sense of what is considered 'good' helps all pupils become more involved in the learning no matter the level or needs of the learners. However, that same level of ability affects the choice and motivation of using particular peer and self- assessment strategies.

In this case, assessment for learning structures have supported students in their learning and achievement with potential for more success. It has provided me with a better understanding of how to incorporate those structures into the different learning needs of a diverse group of learners. Although findings in some areas were not as substantial as anticipated, an enthusiasm to continue developing formative assessment structures, particularly peer and self- assessment, within my teaching practice remains strong.

Chapter Six – Implications of this Research

Introduction

This research was designed to gather information about the effectiveness of formative assessment strategies, particularly peer and self- assessment, on student motivation and achievement within written language.

This research confirms that peer and self- assessment strategies provide opportunities for students to effectively interact, assess their own and others' work against criteria, question and reflect, receive and supply feedback and feed forward for next step learning, problem-solve, be exposed to alternative ways of thinking, and use the social aspect of learning to develop their skills at self-managing their own learning.

Based on the research questions that are the foundations of this project, the collected data, and related literature, this chapter will summarise the results of this research, then examine the implications for practice, the limitations of this research, and the potential directions for further research.

Summary of Research Findings

The overall findings from this research are:

- Participants' achievement levels and motivation to learn increased when using formative assessment / assessment for learning / assessment to learn structures and principles.

- Peer interaction and support, and co-constructing a shared understanding of what is required and how it can be achieved, enhances learning by developing assessment skills, higher levels of engagement in work, and direction for present and next-step learning.
- Different peer and self- assessment strategies are more appropriate than others depending on the literacy skills of the learner.
- Feedback and reflection from both peer and self- assessment provides direction for improvement in present learning and next-step learning.

Assessment for learning principles and structures provide students with the skills and strategies to develop greater awareness of their learning through assessment, feedback, and reflection. The learners, with explicit teaching that is gradually reduced, participate in a process of co-construction to develop a shared sense and understanding of the assessment process and how it supports learning. These collaborative or shared responsibilities for learning engage students' prior knowledge and motivational factors and, with teacher and peer support and encouragement, improve the achievement of each individual student in relation to their own learning needs.

In developing specific peer and self- assessment strategies and skills, the intention is that students will develop not only an enjoyment and interest in their learning but also their confidence, self-efficacy, an internalised locus of control, a mastery goal orientation, and intrinsic motivation to become active, self-regulated learners with teachers and peers to provide support and guidance.

Implications for Practice

In using action research as the methodology for the project, it is highly contextualised and not considered to be scientifically rigorous to allow generalisations. For this reason, this section of the chapter will focus mainly on implications for my own practice with readers taking from it what would be applicable in their own situation.

However, the assessment to learn (AtoL) process is working to develop self-regulating learners in which students take responsibility for their learning by utilising assessment strategies to guide their knowledge and skill development based on their own needs. It is a process that is being promoted by the Ministry of Education within their curriculum documents, through universities in offering professional development to teachers, by researchers who have studied the implications and results of using formative assessment structures and principles, and, humbly, by me.

Within my own practice, I can see new and exciting opportunities to develop peer and self-assessment strategies with my students. In particular, I want to:

- use the Ministry of Education exemplars further. I would like to examine the exemplars more closely with the students so shared understandings of requirements result rather than just a comparative assessment. From there, re-writing the matrices into our class 'kid speak' so all of the students, regardless of ability, develop that shared understanding into a progressive continuum that can be used to progress learning independently. This will also provide more clearly understood next-step learning.
- produce our own exemplars that can be used in support of those of the MOE. Using students' work, comments and evidence of success provided through

peer and self- assessment will supply examples of 'good work' based on ownership and co-ownership of the work and the process.

- spend more time using and developing more proficient reflection strategies, particularly questioning and prompting, to get the students thinking more deeply about their learning and to participate more in class discussions.
- increase self-esteem and self-efficacy in all of my students but especially those who are presenting avoidance techniques. This needs to be developed to ensure a safe learning environment for all.
- consider learning within the 'big picture'; explanations and discussions as to why what is being learnt is important.
- develop AtoL structures in all curriculum areas.
- develop teacher and student goal setting as another aspect of formative assessment structures to support learning.

My list could go on and on but I know I need to look more closely at quality rather than quantity of delivery and I need to slow down the speed of my own learning (let alone that of my students!) to gain optimum benefits.

I believe that formative assessment can be developed in all educational levels regardless of the age of the learners. Admittedly, working in a primary school limits your perspective on the ease of application and use to that level yet the structures themselves are adaptable and flexible in meeting the learning needs of all students. As younger learners start to develop the self-management of their learning, the further they will develop and progress along that process as they mature through the schooling system. Research shows that work avoidance increases as students go

through the school system so using AtoL to develop self-efficacy and motivation to learn may work to counteract that increase.

Taking this information and considering implications for teaching practice in general needs to be a cautious undertaking. The results from this study indicate the successful application of peer and self- assessment strategies, among other formative assessment structures, in raising student achievement and motivation. This success is evident in other research (as indicated in the Literature Review) so incorporating the formative assessment principles into a classroom practice may require change from both the teacher and the students but developing self-regulating learners will not be the only benefit from employing these assessment structures.

Limitations of the Research

Hindsight is a wonderful thing and reflecting on the whole process, various limitations within this research ranging from the data collection tools to the ability to generalise from the gathered information can be identified.

In respect to using action research, because it is undertaken as part of the everyday practice of the practitioner (Denscombe, 2003; Mills, 2000), the scale and scope of the research is limited in its application. It is considered to lack generalisability due to its specific contextualisation and because it is not rigorously scientific (Cohen & Manion, 1989, cited in Scott & Usher, 1999; Denscombe, 2003; Mills, 2000). Directly related to this research being part of my daily programme, I felt that with only four months (mid-August to mid-December) to collect data limited the number of peer and self- assessment strategies I wanted to examine but also the time to develop the

ones I did trial. I also believe that it was not the best time of the school year to be trialling different things as various interruptions and activities, planned and unplanned, interfered with the regular running of the classroom programmes.

Zuber-Skerritt (1996, cited in Denscombe, 2003) considers the overtly political nature of action research as the researcher is not a neutral entity but rather actively engaged in working to improve or transform something within their practice. Consequently, the conflict of reflexivity indicates that the practitioner, having in-depth insider knowledge, can be constrained by that knowledge while also losing objectivity (Denscombe, *ibid.*).

Due to action research being a collaborative practice, it can be problematic when personal actions, reflections, and assumptions are reviewed by others (Piggot-Irvine, 2003). Although group discourse will prevent self-limiting reflection (Schön, 1983, cited in Piggot-Irvine, 2003), it can also result in negative consequences as (Kemmis & McTaggart, 2005) groups critically examine the action of individual members of the collective. Many of these issues can relate directly to peer assessment procedures though care was taken to ensure its proper use (Clarke, Timperley, & Hattie, 2003; Rayment, 2006).

In regard to the research methods, the questionnaire would have been better with more direct questions on motivational factors (e.g. goal orientation, locus of control) as to avoid incorrect or sweeping assumptions based on insider knowledge. Terminology that became common place in the classroom as a result of this study should have been integrated into the questionnaire (e.g. feedback rather than praise)

with more direct referencing to peer and self- assessment structures as it would be more helpful in providing unambiguous information to answer the research questions.

With all the data from the variety of sources, the final stage of analysis involves the elaboration of themes and reflections, their relationship with one another, and their relation to the effectiveness of peer and self- assessment strategies on student achievement and motivation in written language. Although my research analysis will be affected by my interpretations as a researcher, teacher and learner, I have worked hard to limit this by relying on the theoretical issues from literature balanced with a mainly inductive analytical process where patterns are generated from the data, not an imposed reality.

Implications for Further Research

As stated in the first chapter, this thesis developed due to my conflicted state of mind; frustrated by my limited exposure and use of formative assessment, particularly, peer and self- assessment, with the excitement of the successes and progress made in what had been done. Two years later, I am still in that discordant position with wanting to do more to see what further successes and progress can be made.

Teachers are constantly looking for practical ideas that can be easily applied in the classroom with minimal preparation and maximum benefit (we don't want much!).

Thus, further research which have practical ideas and ways to:

- develop the (MOE) exemplars so the needs of struggling learners are met as proficiently as those of their higher achieving peers.

- develop peer and self- assessment strategies, specifically for struggling learners, that provide more detailed written feedback and feed forward to next-step learning while maintaining or developing their confidence and self-esteem in their learning.
- apply peer assessment processes within a class of diverse learners so all students gain the advantages of the learning regardless of achievement levelling of the pairs.
- get students who employ work-avoidance techniques, have poor social skills, have poor self-esteem, and / or limited skills, to participate positively in peer and self- assessment activities.

Summary

Returning to the image of the spider's web at the start of the Literature Review, one can begin to see the intricate weaving of the silken strands is duplicated within a student's web of learning when considering the interweaving of motivation, formative assessment, and learning processes. Clearly evident is the centralised focus that extends outwards as more strands of learning are added to the web design that is individual to each student. Within the learner's web are their motivational factors that develop at home, at school, and within all aspects of their life and that have such a huge impact on their learning. The strength and interconnections of those strands vary yet, like learning itself, it can be further constructed or re-constructed until it is strong enough to maintain its position and support within the web. As more and more is achieved and self-managed by the learner, the larger, stronger, and more intricately entwined the web grows as more support is interlinked between the filaments.

Peer and self- assessment incorporates the social nature of education and the social nature of human beings into structures that enhance learning through the efforts of each student both individually and collectively. The focused, explicit teaching and learning, developed from the co-construction of a shared understanding to assessing the work against measures of success, enhances learning by allowing students to improve their present learning while giving direction to their next-step learning. As students develop more awareness and self-efficacy of their learning, they're more likely to take more responsibility for it. Thus, the motivation to learn will increase as should achievement levels. I believe this research shows the students in this class taking those steps to becoming self-regulated learners.

Appendix 1



Massey University

1 August 2006

Ms Darcy Wilson

WANGANUI

Dear Darcy

Re: HEC: Southern B Application – 06/27
Peer and self assessment in written language: Strategies for motivation and achievement

Thank you for your letter dated 1 August 2006.

On behalf of the Massey University Human Ethics Committee: Southern B I am pleased to advise you that the ethics of your application are now approved. Approval is for three years. If this project has not been completed within three years from the date of this letter, reapproval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

Dr Karl Pajo, Chair
Massey University Human Ethics Committee: Southern B

cc Ms Alison Kearney Dept of Learning & Teaching PN900	A/Prof Nick Zepke Dept of Social & Policy Studies in Education PN900
Dr Lone Jorgensen, HoS School of Curriculum & Pedagogy PN900	Prof Wayne Edwards, HoS School of Educational Studies PN900
Ms Toni Floyd Graduate School of Education PN900	

Massey University Human Ethics Committee
Accredited by the Health Research Council



Appendix 2



Massey University

COLLEGE OF EDUCATION
Te Kōwhiri o Te Mātauranga

SCHOOL OF CURRICULUM
AND PEDAGOGY
Private Bag 11 222
Palmerston North
New Zealand
T 64 6 356 9099
F 64 6 351 3472
www.massey.ac.nz

Peer and Self Assessment in Written Language: Strategies for Motivation and Achievement

Information Sheet

Researcher Introduction

Researcher: **Darcy Wilson**

As a teacher at --- School, I am continually working to improve my teaching through ongoing professional development so your child will receive the best possible education. I am working towards by Master of Education and am presently working on my thesis.

My thesis research project involves trialing a variety of peer and self assessment strategies within written language. I want to examine which strategies are most effective for the different learners within the class in raising motivation and achievement levels.

---, principal of --- School, and the ----- School Board of Trustees, fully support this research project.

Participation Recruitment

I am wanting to trial different strategies with all of the children in my class so all of them can benefit from using different strategies and finding out which approach works most effectively for them. This will also allow me to see how the different strategies affect the motivation and achievement of learners who are achieving at different levels.

Project Procedures

This project is an extension of what is done within the regular running of a classroom. The collected data will provide me with information for the next step that each child requires in their learning. It will also indicate individuals' areas of strengths and weaknesses as another direction for teaching support. This information will be available at Parent / Teacher Conferences in regards to your child only. The data will also form the basis of my thesis report.

Students will be invited to complete a questionnaire that will gather information about their motivation and beliefs relevant to written language. This will be used to monitor changes in attitude and their response to the trialed strategy. Work within the classroom programme will indicate any changes in achievement levels.

Any child not participating in this project will not be disadvantaged in any way. They will continue to receive the same lessons as the participating students but their data will not be included in anything beyond the regular classroom assessment process.

The collected data will be stored in a locked cupboard at school and will be disposed of at the end of my study period (November 2007). At the end of the study, a



summary of the project findings will be made available. Contact me at ----- School if you would like to receive a copy.

To preserve anonymity, neither the names of the individual students nor the school will be identified in the writing of the thesis. However, assessment at the classroom level will be identified to each individual student for next step learning to be correctly determined.

Participant Involvement

This research project will be the basis of the classroom written language programme for the remainder of the school year.

To enhance learning during the regular written language period, a number of different peer and self assessment strategies will be modelled, discussed, tried, and where applicable, extended by the children. Information will then be gathered as to the effects of these strategies on the students' written language outcomes and motivation towards written language.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular questions;
- withdraw from the study at any time;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- be given access to a summary of the project findings when it is concluded.

Project Contacts

You are invited to contact either my supervisors or myself if you have any questions about the project. Following is the contact information for both my supervisors and me.

Researcher: **Darcy Wilson**

----- School – Room 4 ph: ----- fax: -----
email: -----

Supervisors: **Alison Kearney** – Massey University ph: 0508-439-677 ext 8704

email: a.c.kearney@massey.ac.nz

Nick Zepke – Massey University ph: 0508-439-677 ext 8663

email: n.zepke@massey.ac.nz

MUHEC Application

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 06/27. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 06-350-5573 ext 8635, email humanethicssouthb@massey.ac.nz



Massey University

COLLEGE OF EDUCATION
Te Kōwhiri o Te Mātauranga

SCHOOL OF CURRICULUM
AND PEDAGOGY
Private Bag 11 222
Palmerston North
New Zealand
T 646 356 9089
F 646 351 3472
www.massey.ac.nz

Peer and Self Assessment in Written Language: Strategies for Motivation and Achievement

Information Sheet

To be read aloud

Hello class. As I've mentioned before, I am a student at Massey University. I am studying to be a better teacher so that you can get the best possible education. Right now, I am working on a big research project that --- and our Board of Trustees are happy that I am doing.

This project is about trying out different peer and self assessment strategies in written language. I want to find out which strategies you like, why you like them, and how they make you feel about writing.

This work fits into our regular written language programme. The information you provide through your work will show both you and me what you need to do next in your learning, what you are good at, and areas that you need to work on some more. This information will be available to your parents or caregivers at conference time but only about you, and it will also help me to write my research project.

You will be invited to fill in a questionnaire about writing and why you like or don't like writing so I can see how your ideas and skills change when you try out different peer and self assessment strategies in our regular written language time. You will then get to assess why you like or don't like that strategy.

I will not use your name or the name of the school in my report so people reading the report will not know that you were part of my study. All information I get will be locked in a cupboard and will be thrown away at the end of my study in November 2007. If you want to see a summary of my report at the end of my study, let me know.

You do not have to be part of my research project but if you decide to join in, you have the right to:

- not answer any particular questions;
- stop being part of the project at any time;
- ask any questions about the study at any time;
- give information knowing that your name will not be used unless you give me permission;
- get a summary of the project findings at the end of the study.



If you choose not to be part of the research, you will get the lessons with the rest of the class but I will not use any of your information in my project. You will not miss out on anything if you choose not to be part of the study.

You are invited to contact either my supervisors or myself if you have any questions about the project. Following is the contact information:

Researcher: **Darcy Wilson**

---- School – Room 4 ph: ---- fax: ----

email: ----

Supervisors: **Alison Kearney** – Massey University ph: 0508-439-677 ext 8704 email: a.c.kearney@massey.ac.nz

Nick Zepke – Massey University ph: 0508-439-677 ext 8663
email: n.zepke@massey.ac.nz

MUHEC Application

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 06/27. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 06-350-5573 ext 8635, email humanethicssouthb@massey.ac.nz



Massey University

COLLEGE OF EDUCATION
Te Kōwhiri o Te Māteurenga

SCHOOL OF CURRICULUM
AND PEDAGOGY
Private Bag 11 222
Palmerston North
New Zealand
T 040 552 9000
F 018 551 0170
WWW.MASSEY.EDU.NZ

**Peer and Self Assessment in Written Language:
Strategies for Motivation and Achievement**

Participation Consent Form

This consent form will be held for five (5) years.

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree to allow my child to participate in this study under the conditions set out in the Information Sheet.

Child's Name: _____

Relationship to child: _____

Signature: _____

Full Name – printed: _____

Date: _____





Massey University

COLLEGE OF EDUCATION

Te Kōwhiri o Te Mātauranga

SCHOOL OF CURRICULUM

AND PEDAGOGY

Private Bag 11 222

Palmerston North

New Zealand

T 646 055 0200

F 646 055 0100

www.massey.ac.nz

Peer and Self Assessment in Written Language:
Strategies for Motivation and Achievement

Participation Consent Form

This consent form will be held for five (5) years.

I have had the Information Sheet read to me and have had the details of the study explained to me. My questions have been answered to my liking, and I know that I may ask more questions at any time.

I agree to be part of this study under the terms set out in the Information Sheet

Name - printed: _____

Signature: _____

Date: _____



Appendix 6

TRANSACTIONAL WRITING—SURFACE FEATURES—KID SPEAK

	Spelling	Punctuation	Grammar	Layout
Level 1i	<ul style="list-style-type: none"> - I try to figure out letter sounds (usually the first letter sound) - I try to spell common words right 	<ul style="list-style-type: none"> - I try to use full stops and capital letters 	<ul style="list-style-type: none"> - I write simple sentences that make sense 	<ul style="list-style-type: none"> - I leave space between some words - I try to write from left to right
Level 1ii	<ul style="list-style-type: none"> - I can figure out most first letter sounds - I can figure out the main sounds in words and write some of them correctly - I can spell some common words right (Spell Write 1–2) 	<ul style="list-style-type: none"> - with support, I can understand and use full stops and capital letters 	<ul style="list-style-type: none"> - I can write sentences that make sense 	<ul style="list-style-type: none"> - I leave some space between words - I always try to write from left to right
Level 1iii	<ul style="list-style-type: none"> - I write the main sounds in order - I am beginning to use some common spelling patterns - I can spell most common words right (Spell Write 1–2) 	<ul style="list-style-type: none"> - with support, I can understand and use full stops and capital letters 	<ul style="list-style-type: none"> - I can write simple sentences correctly 	
Level 2	<ul style="list-style-type: none"> - I know and write some consonant sounds, blends, and vowel sounds - I know some common spelling patterns and I can transfer these between words - I can spell most words right (Spell Write 1–4) 	<ul style="list-style-type: none"> - I can use capital letters, full stops, commas, question marks, and speech marks regularly 	<ul style="list-style-type: none"> - I can use most grammatical conventions with support (eg correctly formed sentences, tense, subject-verb agreement, pronouns, & prepositions) - I try to write more complex sentences though I may make errors 	
Level 3	<ul style="list-style-type: none"> - I show a good understanding of all basic sounds and patterns in written English - I spell most common words correctly (Spell Write 1–6) 	<ul style="list-style-type: none"> - I can mostly use punctuation on my own (eg use capitals, full stops, questions marks, speech marks, and apostrophes) 	<ul style="list-style-type: none"> - I can use most grammatical conventions correctly (eg correctly formed sentences, tense, subject-verb agreement, pronouns, & prepositions) - my writing may include some errors 	
Level 4	<ul style="list-style-type: none"> - I have a good understanding of all basic sounds and patterns in written English, with few errors - I can spell most common words correctly (Spell Write 1–7) 	<ul style="list-style-type: none"> - I can use the correct punctuation on my own (eg brackets, dashes, colons, and the ellipsis) 	<ul style="list-style-type: none"> - I use most grammatical conventions correctly (eg correctly formed sentences, tense, subject-verb agreement, pronouns, & prepositions) 	

TRANSACTIONAL WRITING—DEEPER FEATURES—KID SPEAK (page 1)

	Audience / Purpose * impact * voice	Content / Ideas
Level 1i	<ul style="list-style-type: none"> - I try to make my writing interesting to the reader by: <ul style="list-style-type: none"> -writing about personal experiences (things that have happened to me or that I know about) -writing about people or characters - I can write simply and honestly about my experiences and about people / characters 	<ul style="list-style-type: none"> - I can form ideas and try to express them
Level 1ii	<ul style="list-style-type: none"> - I am starting to know that a reader is interested in a personal experience or another person or character - I can include a personal response in my writing 	<ul style="list-style-type: none"> - I can form ideas about a personal experience or character
Level 1iii	<ul style="list-style-type: none"> - I know that a reader is interested in a personal experience or another person or character - I can write clearly and honestly about my thoughts, feelings, and ideas 	<ul style="list-style-type: none"> - I can include thoughts, feelings, and ideas that are important to me in relation to an experience or character
Level 2	<ul style="list-style-type: none"> - I can get the audience interested in a personal experience or a character in a variety of ways (humour, anecdotes) - I can write my thoughts, feelings, and ideas clearly - I can choose language features to improve my writing - I can write about my experiences and about people / characters honestly 	<ul style="list-style-type: none"> - I can include thoughts, feelings, and ideas that are important to me in relation to an experience or character - I can add details and comments to my writing
Level 3	<ul style="list-style-type: none"> - I can get the audience interested in a personal experience or a character in a variety of ways (humour, anecdotes) - I can write my thoughts, feelings, and ideas clearly - I can choose language features to improve my writing - I can be honest in writing about my personal views, feelings, and responses to experiences and people / characters 	<ul style="list-style-type: none"> - I can develop my thoughts, feelings and ideas that are important to me in relation to an experience or character - I can add details and comments to my writing
Level 4	<ul style="list-style-type: none"> - I can get the audience interested in a personal experience or a character in a variety of ways (humour, anecdotes) - I can write my thoughts, feelings, and ideas clearly - I can choose language features to improve my writing - I can be honest in writing about my personal views, feelings, and responses to experiences and people / characters - I can portray characters as real 	<ul style="list-style-type: none"> - I can choose and explore ideas that are important to the experience or character - I can focus on developing the main points and interesting parts of an experience or character - I can support main ideas and sequence events clearly

TRANSACTIONAL WRITING—DEEPER FEATURES—KID SPEAK (page 2)

	Structure * sentences * structure	Language * vocabulary * language features
Level 1i	<ul style="list-style-type: none"> - I write in simple sentences. 	<ul style="list-style-type: none"> - I try to use some key personal content words in my writing. - I can use some common words correctly. - I can describe how someone looks or how they behave.
Level 1ii	<ul style="list-style-type: none"> - I write mainly simple sentences but also try compound sentences. 	<ul style="list-style-type: none"> - I can use some key personal content words and common words. - I can use details to describe how someone looks or behaves. - I can get the reader relate to the character.
Level 1iii	<ul style="list-style-type: none"> - I can show some sequence in my writing. - I am starting to use simple conjunctions to join thoughts, feelings, and ideas (and, but). - I write simple sentences but try to change my beginnings. - I try to write compound and complex sentences. 	<ul style="list-style-type: none"> - I can develop my key content words and common words. - I try to use different adjectives, verbs, and nouns in my writing. - I am starting to use some language features (similes, onomatopoeia).
Level 2	<ul style="list-style-type: none"> - I can sequence my thoughts, feelings, and ideas logically. - I try to change sentence beginnings and use long and short sentences. - I mostly write simple and compound sentences - I try to write complex sentences. 	<ul style="list-style-type: none"> - I can use different adjectives, verbs, and nouns in my writing. - I try to make my writing more interesting by using some language features (similes, onomatopoeia). - I try to use direct speech.
Level 3	<ul style="list-style-type: none"> - I try to shape my thoughts, feelings, and ideas for effect. - I am starting to organise some thoughts, feelings, and ideas into paragraphs. - I can use a variety of sentence structures, beginnings, and lengths. 	<ul style="list-style-type: none"> - I use different adjectives, verbs, and nouns in my writing without worry. - Where appropriate, I can use language features to make my writing more interesting (similes, onomatopoeia, personification). - I can use direct speech correctly.
Level 4	<ul style="list-style-type: none"> - I can easily shape ideas for a certain effect or purpose. - I can organise ideas into paragraphs and make logical links within and sometimes between paragraphs. - I can use a variety of sentence structures, beginnings, and lengths for effect. - I can write logically. 	<ul style="list-style-type: none"> - I can use a range of vocabulary to suit the audience and purpose. - I can use appropriate language features to add to the content or to interest the audience. - I can use dialogue and stream of consciousness to improve my writing.

Appendix 7

How Well

LI: **WALT** write an argument or persuasive work.

SC: **WILF**....

- I write logical reasons (at least three) as to why I
should get the ticket 1 2 3 4
- my reasons or arguments make sense 1 2 3 4
- my arguments or reasons are convincing 1 2 3 4
- there are supporting details for my reasons 1 2 3 4

The following is a ‘translation’ of the acronyms used within the class. This peer and self- assessment strategy was co-constructed with the students.

- (LI – learning intention)
- (SC- success criteria)
- (WALT – We are learning to...)
- (WILF – What I’m looking / listening for...)
- (Assessment rating scale: 1 – more care
 2 – okay
 3 – good
 4 – very good)

Appendix 8

How Well Plus

LI: WALT write and perform a rap.

SC: WILF ...

- parts of it rhyme 1 2 3 4
- our rap has a steady beat or rhythm 1 2 3 4
- it contains a safety message from the 'Keeping
Ourselves Safe' programme 1 2 3 4
- we work together (all do our part/share) in
writing 1 2 3 4
- we all perform together so the audience can
clearly understand our words 1 2 3 4

Write out three things our group did well.

Write out one thing our group could do to improve our rap.

The following is a 'translation' of the acronyms used within the class. This peer and self- assessment strategy was co-constructed with the students.

(**LI** – learning intention)

(**SC**- success criteria)

(**WALT** – We are learning to...)

(**WILF** – What I'm looking / listening for...)

(Assessment rating scale: **1** – more care

2 – okay

3 – good

4 – very good)

(This sheet was adapted for peer assessment during the performances.)

Appendix 9

Questionnaire

Name: _____

Date: _____

Colour in the one ☐ that best describes your answer to the question.

1. Do you enjoy writing stories?

☐ ----- ☐ ----- ☐ ----- ☐
not at all a bit quite a bit a lot

2. How do you rate your ability to use punctuation correctly in writing a story?

☐ ----- ☐ ----- ☐ ----- ☐
not so good okay quite good very good

3. How would you rate your ability to organise your story writing?

☐ ----- ☐ ----- ☐ ----- ☐
not so good okay quite good very good

4. How well do you use description to make your story interesting for the reader?

☐ ----- ☐ ----- ☐ ----- ☐
not so well okay quite well very well

5. Do you enjoy reading?

☐ ----- ☐ ----- ☐ ----- ☐
not much a little quite a bit very much

6. Do you think reading affects how well you write stories?

☐ ----- ☐ ----- ☐ ----- ☐
not at all a bit quite a bit a lot

7. Do you think reading affects how imaginative your story writing is?

☐-----☐-----☐-----☐
not at all a bit quite a bit a lot

8. Do you think your spelling influences the way you write?

☐-----☐-----☐-----☐
not at all a little quite a bit very much

9. Do you think your handwriting influences your story writing?

☐-----☐-----☐-----☐
not at all a little quite a bit a lot

10. Do you think your punctuation skills influences the way you write?

☐-----☐-----☐-----☐
not at all a bit quite a bit a lot

11. How important is editing and revising in writing?

☐-----☐-----☐-----☐
not at all a little quite a bit a lot

12. Do you enjoy editing and revising your written work?

☐-----☐-----☐-----☐
not much a little quite a bit very much

13. How important is planning and organising your work before you start writing?

☐-----☐-----☐-----☐
not at all a bit quite a bit a lot

14. Do you enjoy planning and organising your written work?

☐-----☐-----☐-----☐
not at all a bit quite a bit a lot

Use the numbers 1 – 10 to rate the following sentences in order of importance. (1 – most important, 2 – second most important, 3 – third most important,..., 10 – least important). Each number between 1 – 10 must be used only once.

1. What motivates you to write?

- _____ You will get praise from your teacher.
- _____ You will get praise from your peers.
- _____ You do it because your teacher says you have to.
- _____ You will be given tips on how to make you writing better from your teacher.
- _____ You enjoy the topic and want to share your ideas.
- _____ You like sharing ideas with your peers before writing.
- _____ You will get praise from adults other than your teacher.
- _____ You will be given tips on how to make your writing better from your peers.
- _____ You enjoy writing and want to write whenever you get the chance.
- _____ You can volunteer to read your story to the class.

If you are motivated by any other factors, please write them below.

There are 10 pairs of ideas listed below. For each pair, put an 'x' on the line next to your **favourite choice**. Choose only one idea from each pair.

- | | |
|-------------------------------------|-------------------------------------|
| 1. _____ Own topic | _____ Teacher topic |
| 2. _____ Start writing immediately | _____ Plan / organise writing first |
| 3. _____ Starter sentence given | _____ Own starter sentence |
| 4. _____ Writing fact stories | _____ Writing fantasy stories |
| 5. _____ Using a thesaurus | _____ Using own interesting words |
| 6. _____ Discuss ideas for story | _____ No discussion |
| 7. _____ Self editing | _____ Peer editing |
| 8. _____ Small group editing | _____ Teacher conference editing |
| 9. _____ Reading story to others | _____ Keeping story to self |
| 10. _____ Writing different stories | _____ Writing a 'chapter' story |

List any other ways that make you want to write.

Strategy Evaluation Form

Name: _____ **Date:** _____

Strategy: _____

Colour in the one ☐ that best describes your answer to the question.

1. Do you enjoy using this strategy?

☐ ----- ☐ ----- ☐ ----- ☐
not at all a bit quite a bit a lot

2. Why did you enjoy / not enjoy using this strategy?

3. Do you think this strategy helps you improve your story writing?

☐ ----- ☐ ----- ☐ ----- ☐
not at all a bit quite a bit a lot

4. How do you think this strategy helps / doesn't help you improve your story writing?

References

- Absolum, M. (2006). *Clarity in the classroom: Using formative assessment: Building learning-focused relationships*. Auckland, NZ: Hodder Education.
- Airasian, P. W. (1996). *Assessment in the classroom*. New York, NY: McGraw-Hill, Inc.
- Alderman, M. K. (2004). *Motivation for achievement: Possibilities for teaching and learning*. New Jersey: Lawrence Erlbaum Associates, Inc.
- Assessment Reform Group. (1999). *Assessment for learning: Beyond the black box*. Cambridge, UK: University of Cambridge School of Education.
- Assessment Reform Group. (2002). *Assessment for learning: 10 principles: Research-based principles to guide classroom practice*. [On-line]. Available: <http://www.assessment-reform-group.org.uk>
- Association for Achievement and Improvement through Assessment. (2001). *Self-assessment*. [On-line]. Available: <http://www.aaia.org.uk/pdf/AAIAformat4.pdf>
- Baker, S., Gersten, R., & Graham, S. (2003). Teaching expressive writing to students with learning disabilities: Research-based applications and examples. *Journal of Learning Disabilities*, 36 (2), pp. 109 – 123.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Englewood Cliffs, NJ: Prentice Hall.
- Black, P., Harrison, C., Lee, C., Marshall, B. & Wiliam, D. (2002). *Working inside the black box: Assessment for learning in the classroom*. London: School of Education, King's College.
- Black, P. & Wiliam, D. (1998). *Inside the black box: Raising standards through classroom assessment*. London: School of Education, King's College.
- Bogdan, R. C. & Biklen, S. K. (2003). *Qualitative research for education: An introduction to theories and methods (4th edition)*. Boston, MA: Allyn and Bacon.
- Brice, R. G. (2004). Connecting oral and written language through applied writing strategies. *Intervention in School and Clinic*, 40 (1), pp. 38 – 47.
- Brophy, J. (1998). *Motivating students to learn*. Boston, MA: McGraw-Hill.
- Clarke, S. (1998). *Targeting assessment in the primary classroom: Strategies for planning, assessment, pupil feedback and target setting*. Oxon, UK: Hodder and Stoughton.

- Clarke, S. (2003). *Enriching feedback in the primary classroom: Oral and written feedback from teachers and children*. London: Hodder and Stoughton.
- Clarke, S., Timperley, H., & Hattie, J. (2003). *Unlocking formative assessment: Practical strategies for enhancing students' learning in the primary and intermediate classroom (New Zealand edition)*. Auckland, NZ: Hodder Moa Beckett.
- Clay, M. M. (1998). *By different paths to common outcomes*. York, Maine: Stenhouse Publishers.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Crows Nest, Australia: Allen and Unwin.
- Dann, R. (2002). *Promoting assessment as learning: Improving the learning process*. New York, NY: Routledge Falmer.
- Deci, E., Koestner, R. and Ryan, R. (1999). A meta-analysis review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125, 627 – 88.
- Denscombe, M. (2003). *The good research guide: For small scale social research projects (2nd edition)*. Berkshire, England: Open University Press.
- Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality and development*. Philadelphia: Psychology Press.
- Elliott, J. G., Hufton, N. R., Willis, W., & Illushin, L. (2005). *Motivation, engagement and educational performance: International perspectives on the contexts for learning*. New York, NY: Palgrave MacMillan.
- Ezzy, D. (2002). *Qualitative analysis: Practice and innovation*. Crows Nest, Australia: Allen & Unwin.
- Gagnon Jr., G. W. & Collay, M. (2006). *Constructivist learning design: Key questions for teaching to standards*. Thousand Oakes, CA: Corwin Press.
- Gardner, J. (Ed.) (2006). *Assessment and learning*. London, UK: Sage Publications.
- Glicken, M. D. (2003). *Social research: A simple guide*. Boston, MA: Pearson Education.
- Hall, K. & Burke, W. M. (2003). *Making formative assessment work: Effective practice in the primary classroom*. Berkshire, UK: Open University Press.
- Hansen, D. (1989). Lesson evading and lesson dissembling: Ego strategies in the classroom. *American Journal of Education*, 97, 184 – 208.

- Harlen, W. (2006). The role of assessment in developing motivation for learning. In J. Gardner (Ed.), *Assessment and learning* (pp.61 - 80). London, UK: SAGE Publications.
- Hidi, S. (2000). An interest researcher's perspective: The effects of extrinsic and intrinsic factors on motivation. In C. Sansone and J. M. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation: The search for optimal motivation and performance*. New York: Academic Press.
- James, M. (2006). Assessment, teaching and theories of learning. In J. Gardner (Ed.), *Assessment and learning* (pp.47 – 60). London, UK: SAGE Publications.
- Jensen, E. (2005). *Teaching with the brain in mind (2nd edition)*. Alexandria, VA: Association for Supervision and Curriculum Development (ASCD).
- Kemmis, S. & McTaggart, R. (2005). Participatory action research: Communicative action and the public sphere. In N. K. Denzin and Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research (3rd edition)* (pp. 559 – 603). Thousand Oakes, CA: Sage Publications.
- McNiff, J. & Whitehead, J. (2006). *All you need to know about action research*. London: Sage Publications.
- Massey University (2006). Code of ethical conduct for research, teaching and evaluations involving human participants. [On-line]. Available: <http://humanethics.massey.ac.nz>
- Mills, G. E. (2000). *Action research: A guide for the teacher researcher*. Upper Saddle River, NJ: Prentice-Hall.
- Ministry of Education (2006). *Effective literacy practice in years 5 to 8*. Wellington: Learning Media.
- Ministry of Education (2003). *The New Zealand curriculum exemplars – English*. Wellington: Learning Media.
- Ministry of Education (1993). *The New Zealand curriculum framework: Te anga marautanga o Aotearoa*. Wellington: Learning Media.
- Neuman, W. L. (2007). *Basics of social research: Qualitative and quantitative approaches (2nd edition)*. Boston, MA: Pearson Education.
- Nicol, D. J. & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 31 (2), April 2006, pp. 199 – 218.
- Overall, L. & Sangster, M. (2006). *Assessment: A practical guide for primary teachers*. London, UK: Continuum.

- Piggot-Irvine, E. (2003). *The nuts and bolts of action research*. Presented at NZARE, Auckland, New Zealand.
- Pressley, M., Dolezal, S. E., Raphael, L. M., Mohan, L., Roehrig, A. D. & Bogner, K. (2003). *Motivating primary-grade students*. New York, NY: Guilford Press.
- Race, P., Brown, S. & Smith, B. (2005). *500 tips on assessment (2nd edition)*. Oxon, UK: RoutledgeFalmer.
- Ramsden, P. (1992). *Learning to teach in higher education*. London: Routledge.
- Rayment, T. (2006). *101 essential lists on assessment*. London: Continuum.
- Reif, S. F. & Heimborge, J. A. (2006). *How to reach and teach all children in the inclusive classroom: Practical strategies, lessons, and activities (2nd edition)*. San Francisco, CA: Jossey-Base.
- Roehler, L. R. & Cantlon, D. J. (1997). Scaffolding: A powerful tool in social constructivist classrooms. In K. Hogan & M. Pressley (Eds.), *Scaffolding student learning: Instructional approaches and issues* (pp. 6 – 42). Cambridge, MA: Brookline Books.
- Ruddell, R. B. (2002). *Teaching children to read and write: Becoming an effective literacy teacher (3rd edition)*. Boston, MA: Allyn & Bacon.
- Sadler, R. (1998). Formative assessment: Revisiting the territory. *Assessment in Education*, 5 (1), 77 – 84.
- Schmuck, R. A. (2006). *Practical action research for change*. Thousand Oaks, CA: Corwin Press.
- Schunk, D. H. (1996). Goal and self-evaluative influences during children's cognitive skill learning. *American Educational Research Journal*, 33(2), 359 – 438.
- Scott, D. & Usher, R. (1999). *Researching education: Data, methods and theory in educational enquiry*. London: Continuum.
- Sebba, J. (2006). Policy and practice in assessment for learning: the experience of selected OECD countries. In J. Gardner (Ed.), *Assessment and learning* (pp.185 - 204). London, UK: SAGE Publications.
- Silverman, D. (2006). *Interpreting qualitative data: Methods for analyzing talk, text and interaction (3rd edition)*. London: Sage Publications.
- Stipek, D. (2002). *Motivation to learn: Integrating theory and practice (4th edition)*. Boston, MA: Allyn and Bacon.

- Sutton, R. (1995). *Assessment for learning*. England, UK: RS Publications.
- van Kraayenoord, C. E. (2003). Toward self-assessment of literacy learning. In H. Fehring (Ed.), *Literacy assessment: A collection of articles from the Australian Literacy Educators' Association* (pp. 44 – 54). Delaware, USA: International Reading Association.
- Weber, E. (1999). *Student assessment that works: A practical approach*. Needham Heights, MA: Allyn & Bacon.
- Weigle, S. C. (2002). *Assessing writing*. Cambridge, UK: Cambridge University Press.
- Wiseman, D. G. & Hunt, G. H. (2001). *Best practice in motivation and management in the classroom*. Springfield, IL: Charles C. Thomas Publishers.
- Ysseldyke, S. (2001). *Assessment (8th edition)*. Boston, MA: Houghton Mifflin Company.
- Zimmerman, B. J. (2001). Theories of self-regulated learning and academic achievement: An overview and analysis. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (pp. 1 – 37). Mahwah, NJ: Lawrence Erlbaum Associates.