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Feedback for Learning:
Deconstructing Teachers’ Conceptions and Use of Feedback

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ABSTRACT

Cognisant of the critical interplay between beliefs and practice, the current study investigated primary school teachers’ beliefs and understandings about feedback, and the use of feedback to enhance student learning. Central to the investigation has been an exploration of teachers’ beliefs about the nature and place of feedback in student learning and of their role and that of learners in the feedback process. Of equal importance has been an examination of the strategies and practices that teachers utilised and ascribed importance to within the feedback process, including the opportunities offered to students in relation to the development of evaluative and productive knowledge and expertise (Sadler, 1989). To facilitate this investigation, Sadler’s (1989) theory of formative assessment and feedback was used as a framework to inform both the research design and subsequent analyses.

Utilising an interpretive, qualitative, case study methodology the current research was conducted in two sequential phases. Phase one consisted of semi-structured interviews with a convenience sample of 20 experienced teachers. In phase two, three of these 20 participants were selected purposively for classroom observations of teachers’ feedback practice during the teaching of a written language unit. These teachers also participated in a semi-structured interview following each series of observations. During both phases, additional data were generated through field notes and the collection of relevant artefacts. Together, the multiple forms of evidence provided complementary information and ensured a rich pool of data. Three recognised approaches to data analysis were utilised, namely thematic analysis, the constant comparison method and discourse analysis.

The use of Sadler’s theoretical framework illuminated both similarities and differences among teachers in regard to the nature, place and role of feedback in learning and teaching. As teachers’ feedback discourse was examined in more detail the influence of efficacy beliefs on the uptake and enactment of new ideas and practices associated with formative assessment and feedback
became apparent. Teachers' beliefs about teaching and learning were a further mediating influence, particularly in regard to how the feedback process was conceived and with respect to the norms of behaviour that teachers promoted within the feedback process. The complexity of the beliefs/practice nexus was highlighted in regard to the influence of teachers' tacit, at times outmoded beliefs, on practice.

Observations revealed that each of the three case study teachers had adopted many of the strategies associated with contemporary notions of good feedback practice. However, the ways in which these strategies were implemented in the classroom was a matter of considerable variation particularly in regard to the nature of student involvement and the amount of control maintained by the teacher. Findings from this phase of the research supported Fang’s (1996) consistency/inconsistency thesis. In two of the three cases there was a high degree of consistency between teachers' stated intentions and their actions while in the third the opposite was apparent.

Overall, it was concluded that while all teachers had adopted elements of the contemporary feedback 'discourse' none had mastered the 'Discourse' (Gee, 1996). Looking to the future, it is argued that this Discourse cannot be enacted through the mere bolting on of strategies to existing classroom programmes. To enact the contemporary Discourse in the ways imagined three conditions must be met. Firstly, beliefs about teaching, learning and feedback must reflect those embedded in the Discourse. Secondly, there must be a close alignment between those beliefs and practice. Thirdly, teachers must acquire in-depth subject matter knowledge, which will enable them to create the dialogic forms of feedback necessary for students to become self-monitoring and self-regulatory.
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CHAPTER ONE

Introduction

This chapter provides contextual and background information pertinent to the current study. The chapter begins by making explicit the researcher’s interest in, and stance held, in regard to the research topic. Brief mention is made of the wider educational reform agenda, which is then linked to teachers’ beliefs and how these influence the uptake and enactment of various reforms. Specific detail is provided in relation to the New Zealand assessment context. Toward the end of the chapter, a justification for the current research is provided and the research questions are presented. An overview of the ten thesis chapters is found at the conclusion of the chapter.

The Researcher’s Interest In, and Stance Held, in Regard to the Current Study

Qualitative research of an interpretive nature “is distinguished partly by its admission of the subjective perception and biases of both participants and researcher into the research frame” (LeCompte & Preissle 1993, p. 92). Given that all observations and analyses are filtered through the researcher’s worldviews, theoretical positions, values and perspectives (Merriam, 1998), the reflexive nature of social research must be recognised and a reflexive approach undertaken throughout the research process. To counteract the possible threats to the trustworthiness of findings the researcher’s conscious self-understanding of the inquiry process must be applied (Hawe, 2000). In addition, the researcher’s position and the assumptions held in regard to any proposed research must be stated explicitly.

The idea for this project arose out of a long-term interest in formative assessment. This interest started when I was a classroom teacher and is yet to abate after more than three decades of teaching across the primary, special needs and tertiary sectors of education. At each stage of my career I have been able to look at assessment from a different perspective. At the classroom level
my focus was on the children I taught and how I could use the information gained from various diagnostic tools to support learning through modifications to my teaching. As an assistant and deputy principal my concern was with the implementation of national and school policy; how that played out in practice (my own practice and other teachers’ practice in the department) and how best to support teachers to use assessment information to meet students’ needs. As a tertiary teacher my focus has been on developing pre-service and more experienced teachers’ assessment literacy - through an examination of notions underpinning formative assessment and a deconstruction of teachers’ practice. Essentially, what started as a pragmatic interest in the practicalities of assessing children’s learning, has burgeoned into a theoretical and conceptual interest in formative assessment as well as an interest in its application to the classroom.

Like many qualitative researchers, my stance has been borne out through the interplay of personal experience and theoretical knowledge. Together these two resources have highlighted for me the need to problematise the implementation of formative assessment rather than subject it to a process of simplification. To implement formative assessment is an extremely challenging task for a teacher, as it requires a radical reformulation of the teacher’s role, and that of learners, in the processes of learning and assessment. To bring about any meaningful change to practice, teachers must understand the principles and philosophies underpinning formative assessment. At the same time teachers need to investigate their personal beliefs about teaching and learning and how these affect their classroom practice, including their interactions with students. Furthermore, sustained and informed support from more experienced others is an essential element of the change process. My involvement in a number of small-scale research projects investigating various aspects of formative assessment (Dixon, 1999; Dixon, 2005; Dixon & Williams, 2002, 2003; Haigh & Dixon, 2007; Hawe, Dixon & Watson, 2008; Hawe, Tuck, Dixon & Williams, 2002; Williams & Dixon, 1998) has confirmed for me the difficulties teachers face in implementing formative assessment. Such involvement has underscored the need to make
teachers' voices visible in any examination of the translation of policy into practice.

Throughout this thesis the terms ‘formative assessment’ and ‘assessment for learning’ are both used. While some researchers have argued there are subtle differences between the two (for example, Black, Harrison, Lee, Marshall & Wiliam, 2003; Buhagiar, 2007), in this thesis the terms are used interchangeably. Like Gardner (2006), the stance is held that both ‘formative assessment’ and ‘assessment for learning’ embody the same set of assessment practices used in the support and enhancement of student learning.

**The Educational Reform Agenda**

In recent decades wave upon wave of educational reform have swept across numerous countries. Informed by particular perspectives on learning, the pace and complexity of reform have been considerable (Earl & Katz, 2000) and aimed at achieving a shift from a teacher centred to student centred pedagogy (Mohammed, 2006). New Zealand has been no exception. For nearly twenty years New Zealand teachers, like many of their counterparts overseas, have been faced with a “steady stream of new initiatives each containing complex constellations of requirements for change in almost every aspect of education” (Earl & Katz, 2000, p. 98). Teachers have had to deal with the radical restructuring of the education system including major changes to curriculum and assessment (Codd, McAlpine & Poskitt, 1995).

**Teachers and Educational Reform**

While reformers and policy makers are the advocates for change, teachers are the rank and file implementers of change (Fullan & Hargreaves, 1991; Hargreaves & Fullan 1998). Teachers are central to the success of reform movements (Battista, 1994; Proudford, 1998; Thomas & Pedersen, 2003) because they are the critical agents, who have the power to adopt, adapt or reject an innovation. It has been well documented that despite the magnitude and intensity of recent educational reforms, changes to classroom practice have proved to be modest and cursory (Broadfoot 2001; Spillane, 1999).
Cuban (1988) has argued that most often mandated change has failed to achieve the desired outcome, partly because teachers have been directed to participate in a raft of initiatives many of which they have little understanding about. Commonplace has been an instrumental approach to the implementation of an innovation with little attention paid to developing teachers' knowledge and understanding of the underlying theoretical and conceptual perspectives. Yet, to make any real transformation to practice, teachers must take ownership of a particular innovation and they must also understand the philosophy underpinning it. Without this understanding the status quo in regard to teaching and learning is maintained (Delandshere & Jones, 1999; Levin & Wadmany, 2006; Lock & Munby, 2000).

In addition, the pervasive role of teachers' beliefs in the enactment of an innovation has been either ignored or underplayed (Cuban, 1990; Yung, 2002). As Richardson (1996) has noted, if beliefs underpinning a particular reform are incongruent with beliefs held by individual teachers then the success of the reform will be limited. The change process will be slow and the nature of the change superficial. A growing body of evidence has shown that teachers' beliefs are a mediating factor in assessment reform (Delandshere & Jones, 1999; Hargreaves, McCallum & Gipps, 2000; Hayward, Priestley & Young, 2004; Tunstall, 2001). As Tierney (2006) has argued, the sustained championing of particular strategies and approaches by assessment experts or policy makers has little effect on teachers' practice if these strategies and approaches are at odds with their personal beliefs. This argument is supported by others (for example, Levin & Wadmany, 2006) who found that teachers tended to adopt new classroom practices that were congruent with their personal epistemological beliefs or, conversely, resisted or rejected those that did not match their goals and assumptions about teaching and learning. Teacher professional development programmes are now a common feature of assessment reform, instituted to support teachers and gain their commitment to new innovations. Yet there has been little acknowledgement by either policy makers or the change agents leading many of these programmes that the
programme content will be subjected to personal interpretation and meaning making, given that beliefs act as filters or intuitive screens (Goodman, 1988).

Background to the Study: The New Zealand Context
In New Zealand, mandated changes to curriculum requirements have continued through into the twenty-first century with revised iterations of national curriculum documents now in place. To fulfil the policy goal that by the age of nine every child will be able to read, write and do maths successfully (Ministry of Education, 1999), large-scale professional development programmes, aimed at improving the teaching of literacy and numeracy now exist. In addition to curriculum reform, considerable attention has also been paid to the assessment policy agenda (Codd et al., 1995; Willis, 1992).

Informed by new knowledge about the nature and purpose of formative assessment and from research showing that formative practices improve student achievement (Black & Wiliam, 1998), many policy makers, including those in New Zealand, have been concerned with making major changes to assessment policy and practice (Black, 2005; James & Pedder, 2006). In New Zealand there has been an explicit expectation that teachers will use assessment information to support and promote learning and teaching in an on-going manner (Ministry of Education, 1993). To fulfil this expectation there has been an emphasis on improving teachers' assessment literacy and practice (Bell & Cowie, 1997). Yet despite the considerable money spent on professional development programmes, a substantial body of research has demonstrated that teachers' formative practice is still in its adolescent stage. Teachers have struggled to understand the purpose and nature of assessment for learning and to imbed formative assessment strategies into their classroom programmes (Dixon, 1999; Hawe, Tuck, Dixon & Williams, 2002; Hill, 2000; Peddie, 2000; Renwick & Gray, 1996; Williams & Dixon, 1998). Given the importance to the change process of teachers' understandings about assessment and the pivotal role that teachers play in mediating assessment reform (Hayward et al., 2004; Tunstall 2001), these findings have been a cause for concern.
More recently a national assessment strategy (Ministry of Education, 2001) has been developed. Although not exclusively focused on formative assessment, the strategy has placed emphasis on its importance to learning and teaching. At the classroom level attention has been drawn to the need for teachers to set specific and challenging goals with learners, foster partnerships focused on learning and use assessment to improve learning. While the provision of quality feedback was not a key focus of the strategy, the need for teachers to provide constructive feedback was signalled. Since the original publication of the assessment strategy, the notion of quality feedback has been emphasised more strongly and identified in professional development programmes as a critical and vital aspect of teachers’ practice (Ministry of Education, 2004).

The national assessment strategy has provided a focal point for assessment related, local and national professional development opportunities focused on improving assessment practice at the classroom and school level. Since 2002, Assess to Learn (AToL), a Ministry of Education professional development initiative, has been available to schools. Although not exclusively devoted to improving teachers’ formative assessment and feedback practice these aspects of practice have constituted a significant component of the professional development.

The AToL programme has been offered regionally through a school’s involvement in a contract led by one of nine approved professional development providers (Assessment Focus Group, 2004). Alternatively, an online version of the programme is accessible through the Ministry of Education’s Te Kete Ipurangi website. The online option has enabled schools and teachers to undertake their own professional development (Ministry of Education, 2004). Alternatively, for schools that have elected to take part in a contract, changes to schools’ policies and teachers’ assessment practices have been instituted through a system of external consultants and other change agents such as assessment facilitators and lead teachers within a school, and supported by workshops and other in-service activities. At the encouragement of the Ministry of Education, AToL providers have been major advocates of
the work of Shirley Clarke, a UK based education consultant who has worked intensively with teachers. Teachers have been introduced to the work of Clarke through her texts written for schools (Clarke, 2001, 2005), including one specifically for a New Zealand audience (Clarke, Timperley & Hattie, 2003). To assist teachers to set specific and challenging goals with learners, AToL providers have encouraged teachers’ adoption of the use of learning intentions and success criteria, terms developed by Clarke. The use of such practices has been promoted as a way in which expected learning can be framed and shared with learners in a manner that is both understandable and accessible to them. Furthermore, teachers have been encouraged to frame their feedback to learners in relation to these pre-specified intentions and criteria.

**The Research Topic: Its Importance and Significance**

Feedback is an essential component of formative assessment (Bell & Cowie, 1997, 2001; Black, 2000; Black & Wiliam, 1998; Pryor & Torrance, 1997; Sadler, 1989, 1998; Torrance & Pryor, 1998), which if used appropriately can support and scaffold students’ learning (Gipps, 1994; Hattie & Timperley, 2007; Torrance & Pryor, 1998; Tunstall & Gipps, 1996) and lead to substantial learning gains. While the significance of feedback to learning has been well established (Hattie, Biggs & Purdie, 1996; Hattie & Jaeger, 1998), its impact on learning has proved to be both positive and negative (Kluger & DeNisi, 1996).

While many published studies emphasise the importance of feedback, few have investigated the meaning of feedback in relation to classroom learning. This has led to calls for research “to qualitatively and quantitatively investigate how feedback works in the classroom and learning processes” (Hattie & Timperley, 2007 p. 104). Indeed my in-depth perusal of the literature during the early stages of the doctoral process revealed a paucity of studies that had “systematically investigated the meaning of feedback in classrooms” (Hattie & Timperley, 2007, p. 81). However, a paucity of studies was not the sole reason for the inception of the current project. Findings from several New Zealand studies, indicating that teachers’ understandings about
and practice in giving feedback were less than robust (Knight, 2003; Peddie, 2000), were an additional source of motivation. Furthermore, given that the National Assessment Strategy (Ministry of Education, 2001) and associated professional development initiatives had focused schools’ and teachers’ attention on formative assessment and feedback, it seemed timely to investigate the question “How is feedback conceptualised and implemented by teachers?”

Cognisant of research that has demonstrated the critical interplay between beliefs and practice (Hayward et al., 2004; James & Pedder, 2006; Tunstall, 2001) and the appeals for research studies that would investigate beliefs and practice in tandem (Delandshere & Jones, 1999; Lock & Munby, 2000; Yung, 2002), the current research was designed to interrogate teachers’ beliefs, understandings and use of feedback within their own contexts. It was hoped that by investigating the participating teachers’ beliefs and understandings, valuable insights would be gained into their behaviours and the manner in which their feedback practice was constructed.

Specifically the research has sought answers to the following questions:

- What conceptions do teachers hold about the nature and role of feedback in the enhancement of learning?
- When and how do teachers give feedback?
- What do teachers focus on when giving feedback?
- Do teachers engage in a range of feedback practices?
- How is teachers’ use of feedback affected by the context within which feedback occurs?
- How is feedback related to goal setting and criteria for success?
- How do teachers involve learners in the feedback process?
- Do teachers hold differing conceptions of feedback?
- If there are differences in teachers’ conceptions of and practice in providing feedback how can those differences be explained?
Given “the crucial role of the classroom teacher in [the] mediation [of an innovation]” (Yung, 2002, p. 98), an understanding of teachers’ beliefs, viewpoints, perceptions and practical realities as they have attempted to grapple with new ideas about feedback and develop their feedback strategies has been central to the current investigation.

**The Structure and Organisation of the Thesis**

This thesis is organised into ten chapters. Chapter One provides an introduction to the research through a brief examination of the researcher’s interest in, and stance held, regarding the research topic. To provide the reader with the necessary background information, the current study is situated within the context of the wider educational reform agenda and background information is provided in regard to the New Zealand context. The research topic, its importance and significance are outlined, as are the research questions. The chapter concludes with an overview of the ten thesis chapters.

Chapters Two and Three review bodies of literature relevant to the current research. Chapter Two reviews selected assessment literature. In this chapter attention is paid to the evolving discourse associated with formative assessment / assessment for learning, including an in-depth description of the phenomenon as it is conceptualised currently. Later in the chapter, a range of research findings is reported to underscore the disjuncture between the assessment discourse and the understandings and practice of teachers as they have attempted to enact the assessment for learning discourse encapsulated in policy statements. Drawing upon the literature on beliefs, Chapter Three examines the role and function of beliefs, including those beliefs pertaining to an individual’s capabilities and capacity to act with personal agency. Particular consideration is then paid to teachers’ beliefs and their influence on practice. Chapter Three concludes with a presentation of research findings from two diverse studies that examined the role that teachers’ beliefs played in the uptake and enactment of two specific assessment reforms.
Chapter Four presents the theoretical framework that informed the present research. Sadler’s (1989) theory of formative assessment and feedback is outlined. The chapter continues with a description of the impact of Sadler’s theory on both research and practice. Finally, a justification for the selection of Sadler’s theoretical framework is given.

Chapter Five outlines the research process and associated procedures. The research questions are revisited and a justification for the selection of the interpretive paradigm and the use of a qualitative methodology is presented. Detailed justifications for, and descriptions of, the sampling techniques employed, the research participants, the data collection methods utilised, and the methods and modes of analyses employed are included. Ethical principles and issues as they pertained to the current research are also addressed. The chapter concludes by outlining how the four evaluative criteria for appraising the trustworthiness of qualitative research (Lincoln & Guba, 1985) were met.

Chapters Six through Eight report the research findings. In Chapters Six and Seven data generated during Phase One of the research are utilised. In Chapter Six, four themes common across all the teachers are reported. These themes are: feedback is an integral part of learning and teaching; feedback is comprised of three inter-connected elements; feedback requires teachers to draw upon a range of knowledge and experience; and feedback involves communicating learning expectations to students. Chapter Seven considers the differences between teachers in regard to the framing of feedback statements; the communication of the goals of learning; and the development of students’ evaluative and productive knowledge and expertise. Based on data collected during Phase Two of the research, Chapter Eight provides an analytic comparison of teachers’ practices structured under Sadler’s three conditions for effective feedback: communicating the goals of learning; comparing current with desired performance; and closing the gap between current and desired performance.
Based on the findings presented in Chapters Six, Seven and Eight, Chapter Nine presents a discussion of these findings with reference to critical literature. This chapter is structured around two themes, which have been levered out of the data. These themes are: teachers' efficacy beliefs and teachers' beliefs about learning and teaching.

In the final chapter, Chapter Ten, conclusions are drawn in regard to the research questions. Implications for formative assessment practice and for teacher professional development are discussed. Areas for future research are then identified. The chapter concludes by drawing attention to the study's contribution to the field.

The Next Chapter
Assessment to enhance learning is a relatively new discourse created in support of a new purpose for assessment. Like any discourse, it has been dynamic, undergoing a number of discursive shifts since its inception. In the next chapter, drawing upon scholarly contemporary and current literature, these discursive shifts are traced over time. Findings from a raft of national and international research studies are then reported to illustrate the 'problem of enactment' (Kennedy, 1999).
CHAPTER TWO

Assessment to Enhance Learning: An Evolving Discourse

A change in assessment's primary purpose during the 1980s, from the measurement of learning to the enhancement of learning, has generated a new field of assessment discourse and inquiry. Informed as it has been by an amalgam of notions drawn from constructivist, socio-cultural, metacognitive and self-regulation theory, the discourse created to describe assessment to enhance learning has gone through a number of iterations or discursive shifts. As a result of these discursive shifts, the current discourse is both ambitious and complex (Dwyer, 1998; James, 2006; Perrenoud, 1998; Shepard, 2005), with the roles and responsibilities assigned to teachers and learners in learning and assessment radically transformed. The first section of this chapter provides an overview of how the discourse has evolved over time. It concludes with an in-depth description of the phenomenon as it is conceptualised currently.

While the discourse has evolved, the implementation of assessment to enhance learning has proved to be neither a simple nor straightforward matter. Teachers cannot implement assessment to enhance learning in ways reflective of the current discourse merely through the addition of particular strategies. A change in behaviour through the incorporation of a particular strategy will have little effect on making the transformational change necessary unless it is accompanied by changes in "understanding, values and attitudes" (James & Pedder, 2006, p. 27). Assigning learners a central role in both learning and assessment necessitates teachers rethinking their roles and responsibilities, and those of learners, in the learning / teaching contract. More attention has to be paid to helping students become effective learners (Buhagiar, 2007; James & Gipps, 1998). In the second section of this chapter research findings are reported to underscore the disjuncture between the assessment discourse, as created and recreated by 'the academy', and the understandings and practice
of teachers as they have attempted to implement assessment policy requirements.

**Assessment to Enhance Learning: A Series of Discursive Shifts**

In this section of the review the evolution of formative assessment to assessment for learning is traced. The section begins by outlining briefly the paradigm shift that occurred in assessment, moving the focus from the measurement of learning to the enhancement of learning. Next, the integrated nature of teaching, learning and assessment is considered. Particular attention is then given to the changing expectations of teachers and learners in the assessment process. The section concludes with an in-depth examination of the practices associated with assessment for learning.

**The Identification of a Formative Purpose for Assessment**

Traditionally the purpose of assessment was to measure achievement. Today, while information gained from assessment is intended to fulfil a number of purposes (Broadfoot, 1992; Gipps, 1994), its primary purpose is the enhancement of learning (Broadfoot, 1993). Such a radical change in purpose led commentators in the field to state that assessment had undergone a paradigm shift (Gipps, 1994). Whilst the notion of a paradigm shift appeared in the assessment literature in the 1980s and 1990s the concept of formative appeared earlier. Taken from the programme evaluation literature (Scriven, 1967), the term formative assessment was first applied to education in the early 1970s to highlight the role of assessment in the enhancement of learning (Bloom, Hastings & Madaus, 1971). In applying formative and summative assessment to the process of student learning, Bloom et al. made three distinctions between the two: purpose, timing and level of generalisation. They contented that, concentrated as it was on student learning, formative assessment had to occur during instruction and hence by necessity had to be narrow in focus (Newton, 2007).

The identification of assessment’s formative function meant that previously held understandings about the place of assessment in learning and teaching
were no longer valid. If assessment were to operate formatively, learning, teaching and assessment had to be conceptualised as an integrated entity; assessment had to be thought of as the integrative link between learning and teaching (Gipps, 1994; Harlen & James, 1997; Shepard, 2000). Since its application to education, significant attention has been paid to formative assessment in relation to conceptualising the integrated nature of teaching, learning and assessment (for example, Bell & Cowie, 2001; Gipps, 1994; Harlen & James, 1997; Sadler, 1989; Torrance & Pryor, 1998). Influenced by current thinking about what constituted effective learning, these conceptualisations have gone through a number of iterations. While learning theories do not make explicit the implications for teaching or assessment (James, 2006), changing explanations of how learning occurs are mirrored in a developing discourse of assessment to enhance learning. Whereas initial conceptions were shaped and influenced by key ideas prevalent in the behaviourist and constructivist theoretical literature, more recently, socio-cultural perspectives on learning have informed the discourse surrounding assessment to enhance learning (Cowie, 2005; Gipps, 1999; James, 2006).

A developing understanding of the integrative nature of learning, teaching and assessment has resulted in a number of discursive shifts within the discourse. These shifts have been reflected in a change in the language used to describe the phenomena and in regard to the roles and responsibilities assigned to teachers and learners in the assessment process. Significantly for teachers, these various discursive shifts have been reflected in assessment policy developed to shape and inform assessment practice. New Zealand policy makers, like many of their Western world counterparts, have championed assessment (James, 2006; Ministry of Education, 1993; 2004) as the means by which student achievement can be raised (Black et al., 2003; Hattie, 2003).

**Early Understandings of Formative Assessment: An Emphasis on the Teacher's Role**

With one or two exceptions (for example, Sadler, 1989), during the 1980s and into the 1990s, the discourse of formative assessment paid far greater attention
to the teacher's role (for example, Harlen, 1998; Harlen & James, 1997; Tunstall & Gipps, 1996) than to investigating and articulating a role for the learner. In these early conceptualisations onus was placed on the teacher in regard to the actions that needed to be taken so that learning could occur. As can be seen in the following explanation of formative assessment, an integrative link between assessment and teaching is established but no link is made between learning and assessment:

"Formative assessment ... means teachers using their judgements of children's knowledge or understanding to feed back into the teaching process and to determine for individual children whether to re-explain the task/concept, to give further practice on it, or move to the next stage" (Tunstall & Gipps, 1996, p. 389)

Perrenoud (1998), in an invited response to a major review of the research investigating formative assessment (Black & Wiliam 1998), drew attention to the fact much of the research agenda had in fact focused on the "formative evaluation practices of teachers" (p. 99). Likewise, Torrance and Pryor (1998) voiced criticisms of some of their contemporaries' articulations, stating that the role of the teacher had been overplayed at the expense of the learner (for example, Harlen, 1998; Harlen & James, 1997; Tunstall & Gipps, 1996). Extending their argument, Torrance and Pryor contended that over-emphasising the role of the teacher and underplaying the learner's role in formative assessment reflected a behaviourist interpretation of what formative assessment would look like in practice. From their perspective, early iterations of formative assessment did little to challenge the roles traditionally played by teachers and learners in assessment. Locating formative assessment in the act of teaching placed the teacher in control of the process and maintained the status quo in regard to the nature of the relationship that existed between teacher and learner. The learner was dependent on the teacher to make appropriate judgements and decisions.
New Zealand Formative Assessment Policy: Highlighting the Teacher's Role

New Zealand assessment policy, developed during the early to mid 1990s, echoed understandings of the time about assessment purpose. Specific mention was made in the New Zealand Curriculum Framework (NZCF) (Ministry of Education, 1993) of the formative purpose of school-based assessment where it was emphasised that assessment's primary purpose was "to improve students' learning and the quality of learning programmes" (p. 24).

National curriculum statements, developed in support of the curriculum framework, also drew attention to assessment's formative function. As was the case in the United Kingdom (Torrance & Pryor, 1998), the spotlight was on the teacher and his/her role. As can be seen in an extract taken from the English national curriculum statement, the teacher's role is made explicit. It is the teacher who is expected to identify strengths and weaknesses in a performance and to make the ensuing decisions. Noticeable by its absence is any overt mention of the learner's role in the formative assessment process:

"... ongoing, continuous assessment which provides immediate feedback, enhancing learning as it proceeds ... Teacher assessment, in which progress and strengths are recognised, difficulties diagnosed and strategies to overcome them planned" (Ministry of Education, 1994, p. 21).

Similarly, in a Ministry of Education (MoE) publication aimed at assisting schools to develop assessment policy that would support student learning and the quality of learning programmes, the responsibility for using assessment information rested with teachers:

"Teachers may use assessment to identify the knowledge and experience which students bring to a learning task, to plan and/or refine teaching and learning programmes, and to meet individual or group needs" (Ministry of Education, 1994a, p. 7).

In the same publication (MoE, 1994a) a role for students in school-based assessment was identified through the promotion of peer and self-assessment.
However, the examples given in regard to how students might engage in self-assessment emphasised involvement at the completion of learning. Essentially a summative rather than formative role was identified for students.

Assessment for Learning: Moving the Spotlight onto the Learner's Role

Drawing on developments in the fields of socio-cultural learning theory, metacognitive and self-regulation theory, a number of writers (Bell & Cowie, 1997: Black, 1999; Black & Wiliam, 1998; Sadler, 1989, 1998; Shepard, 1995; Torrance & Pryor, 1998) argued that the learner had to be assigned a key role in the assessment process. Of central importance was the need for the learner to be able to assess and improve the quality of the work produced through application of the skills of self-monitoring and self-regulation (Butler & Winne, 1995; Gipps, 1994; Perrenoud, 1998).

As a result, during the 1990s, the concept of 'assessment for learning' first appeared in the assessment literature and has now become part of the discourse of assessment (Gardner, 2006). A group of predominantly UK based academics primarily responsible for coining the term, described assessment for learning as:

"... the process of seeking and interpreting evidence for use by learners and their teachers to decide where learners are in their learning, where they need to go and how best to get there"


While in Gardner's (2006) opinion, both formative assessment and assessment for learning embody the same set of practices, assessment for learning is a more appropriate term in that it encapsulates "the essence of our pursuit: the promotion of assessment to support learning" (p. 2). Moreover, it assigns a central role to the learner. The learner is charged with the responsibility for using assessment information to enhance his/her learning. As others have noted the concept of assessment for learning makes the link between assessment and learning explicit (Black et al., 2003).
Assessment for Learning: A Current Conceptualisation

In a document entitled “Assessment for learning: 10 principles”, assessment for learning was described as:

- Part of effective planning;
- Focused on how students learn;
- Central to classroom practice;
- A key professional skill;
- Sensitive and constructive in its intent;
- Fostering student motivation;
- Promoting student understanding of goals and criteria;
- Helping students know how to improve;
- Developing students’ capacity for self assessment;
- Recognising all educational achievement.

(Assessment Reform Group (ARG), 2002).

Through identification of the 10 principles underpinning assessment for learning, the ARG focused more closely on what Perrenoud (1998) referred to as “a different object of analysis, more closely centred on the effects of regulation in learning” (p. 100). Informed by Vygotskian notions related to the socially constructed nature of learning and the need to encourage student autonomy, student agency in learning and assessment was brought to the fore. In turn, the teacher’s role was recast. Teachers were charged with the responsibility for helping students acquire the reflective habits of mind that would enable them to share responsibility for learning and assessment. Promoting student autonomy was seen as part of a teacher’s role (Buhagiar, 2007; Cowie, 2005; Marshall & Drummond, 2006).

Feedback: An Essential Component of Assessment to Support Learning

Feedback can be embedded in an intricate mix of directives, dialogue, discussion and questions (Assessment Reform Group, 1999). It can exist in a multitude of forms such as teachers’ written comments, grades or marks, oral responses and non-verbal gestures. It can be given in either a planned or spontaneous manner. Whatever its form, feedback is an essential component

Feedback is now conceptualised as the crucial interaction that occurs between teacher and learner(s) during learning and teaching, which will aid the improvement process through the identification of a learning gap and the actions necessary to close that gap. In this way the purpose of feedback has moved away from a corrective to a scaffolding function that supports learning through the zone of proximal development (ZPD) (Shepard, 2005). For feedback to fulfil its formative function, that is to reduce the disparity between a student’s current understandings and performance and a goal, it must provide answers to the following questions – ‘Where am I going?’ ‘How am I going?’, ‘Where to next?’ (Hattie & Timperley, 2007).

The notion of feedback as a one-way communicative activity, where the source of information is external to the learner, has been criticised due to its dependency-creating effect on learners (Sadler, 1989; Wiggins, 1993). Recognising the pivotal role that learners play in learning and assessment, the most valuable form of feedback is now commonly considered to be that which is constructed jointly by teachers and learners. Learners in collaboration with more expert others, are now seen as the generators of feedback information about their own performances and those of their peers. Feedback is considered most effective during performance when it enables the learner to self-assess, self-regulate and self-adjust so that feedback itself provides “an episode of learning” (Wiggins, 1993, p. 183). Indeed, the need for feedback to promote self-regulatory behaviour in learners has been emphasised by a number of commentators (Butler & Winne, 1995; Nicol & Macfarlane-Dick, 2006; Sadler, 1989). Amalgamating research from the fields of self-regulation and formative assessment and feedback, seven principles of quality feedback practice have been identified if self-regulatory behaviour is to be promoted. It is now argued that quality feedback should:

- Clarify what a successful performance looks like;
• Facilitate the development of self-assessment;
• Deliver high quality information to students about their learning;
• Promote teacher and peer dialogue;
• Foster positive motivational beliefs and self-esteem;
• Provide opportunities for learners to close the gap between current and desired performance;
• Generate information to teachers that can be used to modify teaching.


Goal Setting as a Component of Assessment for Learning

A learning partnership between teacher and learner is a fundamental component of assessment for learning. However, a partnership can be established only if the learner has a clear idea of the goal(s) of learning and the standard and criteria by which a performance will be judged. As a result, the setting and sharing of goals and the identification of the standards that students are working towards are now considered to be an integral part of the assessment and feedback processes (ARG, 1999). Underpinned by the recognition that learners must work within their ZPD, it is now commonly acknowledged that goals must be achievable yet challenging (Hattie & Jaeger, 1998; Sadler, 1989). Of equal importance, but given less attention in the assessment literature, are findings associated with motivation and attribution theory that make the important distinction between learning goals and performance goals and the effects each has on learners' conceptions about success or failure in learning.

The two different goal constructs (learning and performance) which comprise achievement goal theory provide a robust explanation of the contrasting motivational processes evident in learners; the ways in which learners conceptualise success and failure (Dweck, 1989) and how feedback constructs and contributes to these perceptions (Gipps, 1994). A learning goal should encapsulate the "knowledge, behaviour, skill or strategy students are to acquire" (Schunk, 2000, p. 336). Learners' attention should be focused on the learning required so that they are clear about the nature and purpose of any
given activity and are cued into "the kind of student responses that the activity requires" (Brophy, 2001, p. 11). As has been established elsewhere (Dweck, 1986), learning goals are empowering for learners. They focus the learner on the task, promote self-efficacy and risk taking and foster a motivation to learn. Conversely, in emphasising task completion, performance goals frequently link a sense of self worth with ability. This, in turn, leads to social comparisons and low perceptions of ability among students who are experiencing difficulty (Schunk, 2000). Hence, performance goals become restrictive as learners strive either to gain favourable judgements from teachers or to avoid negative judgements at all costs (that is they are motivated not to fail).

Evidence suggests that, to date, the setting of performance goals has been prevalent in school settings (Torrance & Pryor, 2001). To promote a culture of learning within the classroom, teachers must focus on establishing learning goals with children and "communicating quality criteria and focusing the students' attention on the intended learning goals of the activity, rather than on performance goals" (Torrance & Pryor, 2001, p. 624). Relatively recent research findings have revealed that teachers placed little emphasis on sharing learning goals with students and rarely clarified the purpose of classroom activities with their students (Torrance & Pryor, 2001). It has also been demonstrated that frequently the criteria for success were personal to the teacher and were more likely to involve norm referenced interpretations of performance than a criterion-referenced approach (Gipps, 1994; Torrance & Pryor, 2001).

Clarke (2000), working in an in-service, advisory capacity with teachers promulgated and popularised the use of 'learning intentions'. Intentions, if well written, are essentially the specification of learning goals with the aim of focusing the learner's attention on the substantive learning that is contained within a task(s). Whilst a strong advocate for the use of learning intentions, Clarke (2000) has argued that as with any new teaching / learning strategy, time and support are critical to implementation. In particular teachers need
support to provide feedback in relation to the learning intentions and to establish criteria that are more than a reiteration of the task. Support is also needed in relation to the use of models that exemplify the required performance.

Drawing attention to the fact that little is known about students' perceptions and involvement in formative assessment, Cowie (2005) investigated Year 7 to 10 students' experiences of assessment for learning. Her research makes a valuable contribution to the field as it highlights the effect of goal orientation on students' perceptions of their role and that of their teachers in learning and assessment. Students with learning goals expected to take an active role in formative assessment. They considered assessment a joint teacher-student responsibility. In contrast, those students with performance goal orientations considered assessment to be the responsibility of the teacher. These students wanted teachers to tell them how to complete tasks.

The difference in students' perceptions about their role in assessment accentuates the difficulty facing teachers if they are trying to encourage students to take an active role in learning and assessment. Emphasis is placed on the need for teachers to evoke the support of learners if they are to become involved in the assessment of their learning. Shepard (2000) has commented that there is the necessity to "... change the social meaning of evaluation. Our aim should be to change our cultural practices so that teachers and students look to assessment as a source of insight and help instead of an occasion for meting out rewards and punishment" (p. 10). To achieve this aim learners must become proactive through meaningful engagement in self-assessment.

**Self-Assessment as a Component of Assessment for Learning**

Derived from the belief that the locus of learning resides within the learner, self-assessment is considered a necessary and vital component of assessment for learning (Black *et al.*, 2003; Sadler, 1989). Self-assessment can be explained as an intrinsic reflection on one’s own learning and a powerful
source for the improvement of learning (Black, 1993; Elshout-Mohr, 1994). The aim of incorporating self-assessment into classrooms is to develop students' metacognitive skills in authentic and meaningful contexts (Black, 1999; Black & Wiliam, 1998). Power can be shared with learners in a collaborative manner (Bourke, 2000; Shepard 2000) and hence learner responsibility and ownership can be increased (Shepard, 2000; Weeden, Winter, Broadfoot, 2002; Wiggins, 1992). Indeed, Klenowski (1995) discovered that when students were involved in self-evaluation they became more interested in feedback and the criteria for success.

However, for self-assessment to be productive in the development of metacognitive skills and strategies, it must be informed by what is known about successful goal and standard setting and feedback. Learners must have a clear understanding of expectations (learning goals). They need to be involved in the establishment of criteria for success and have a good understanding of those criteria. They also need access to models and exemplars that can be used as discussion points that will help to both specify and construct achievement and improvement (Weeden, Winter & Broadfoot, 2002).

**New Zealand Assessment Policy: A Reflection of Current Thinking about Assessment for Learning**

In recent times in New Zealand, the strategic directions for assessment at the system, school and classroom levels have been brought together under the umbrella of the National Assessment Strategy (Ministry of Education, 2001). Informed by what is currently known about assessment for learning, attention has been drawn, at the classroom level, to the need for teachers to: set specific and challenging goals with learners; foster partnerships focused on learning and use assessment to improve learning. While the provision of quality feedback has not been a key focus of the strategy, the need for teachers to provide constructive feedback has been signalled. Since the original publication of the assessment strategy, the notion of quality feedback has been emphasised more strongly and identified as a critical and vital aspect of

However, the relationship between policy and practice is not simple (Hutchinson & Hayward, 2005). It has been argued that there is a fundamental flaw in the way in which teachers are expected to operationalise policy:

"Typically the relationship between research, policy and practice is conceived as practice acquiring pre-existing knowledge from research; rarely is it constructed in terms of supporting individuals to understand research and policy and to produce new knowledge from these foundations" (Hayward, Priestley & Young, 2004, p. 399).

Thus, even if policy is robust and grounded in research and teachers are willing and committed to its implementation, there remains the problem of enactment (Kennedy, 1999). Teachers will be faced with the difficulty of translating what they know about effective practice into action (Lee & Wiliam, 2005).

Implementing Assessment to Enhance Learning: The Problem of Enactment

Utilising national and international research findings, this section of the review begins by drawing attention to the difficulties teachers have faced as they have attempted to put assessment policy into practice. Findings related to teachers' understandings of formative assessment and its use in the support of learning are reported. Consideration is then given to research findings specifically related to feedback, including teachers' use of questioning and dialogue in the promotion of learning. The section concludes with a commentary regarding teachers' understandings of the evolving assessment for learning discourse.

The Problem of Enactment

Crooks' (1988) seminal work on assessment and its effect on classroom learning suggested that formative assessment was generally weak in practice,
with much classroom assessment encouraging superficial and rote learning. Since this time teachers’ assessment literacy and practice have been the focus of numerous studies both overseas and in New Zealand (for example, Black, 1993; Crooks, 1988; Dixon, 1999; Gipps, Brown, McCallum & McAlister, 1995; Hill, 2000; McCallum, McAlister, Gipps & Brown 1993; Williams & Dixon, 1998). Studies have revealed that the implementation of assessment policy has been problematic for teachers (Bachor & Anderson, 1994; Broadfoot, Osborn, Panel & Pollard, 1996; Earl & Katz, 2000; Lock & Munby, 2000; Mavrommatis, 1996). During the 1990s it was reported that the extent and nature of formative assessment was impoverished (Daws & Singh, 1996) and in serious need of development (Russell, Qualter & McGuigan, 1995). In other instances it was revealed that changes made to assessment practice had been counter productive and in conflict with the stated aims of the policy initiatives that triggered them (Delandshere & Jones, 1999; Gipps et al., 1995; Willis, 1992, 1994; Yung, 2001).

The difficulties teachers have faced as they have sought to implement assessment to enhance learning policies have been considerable. Interestingly, the research undertaken at different points in time over the last fifteen years reflects the time, context, discursive shifts and understandings about assessment pertinent to the time. For example, given the shift in assessment purpose in the late 1980s from summative to formative, as well as the emphasis placed on the role of the teacher in formative assessment, much of the early research undertaken during the 1990s sought to ascertain teachers’ understandings of the place and role of assessment in teaching and learning. Latterly, emphasis has been placed on examining teachers’ understandings of the nature of assessment for learning, including their understanding and use of particular pedagogical strategies that support the processes of learning and assessment. Significantly, as others have noted (Broadfoot & Black, 2004; Cowie, 2005), even though the role of the learner has been given prominence in more recent iterations of the assessment for learning discourse, the learner’s perspective has been, for the most part, absent from the research agenda.
Teachers' Understandings of Formative and Summative Assessment

During the 1990s lack of teacher understanding about the formative and summative purposes of assessment was reported frequently (Harlen & James, 1997; Mavrommatis, 1996) with it being noted that many teachers were not able to distinguish between the two purposes (Harlen & Malcolm, 1996). Baker (1995), in working with New Zealand teachers, found that they did not view assessment as integral to teaching and learning. Rather, they saw it as an additional task that bore little relationship to what occurred in the classroom. Subsequently, this created a dislike and cynicism towards assessment, which worked to prevent the development of the essential interdependence between learning and assessment. More recently, a New Zealand project (Dixon & Williams, 2002), found that while teachers had a theoretical understanding of the nature, place and purpose of formative assessment in teaching and learning this at times became muddled when describing aspects of their practice. Although teachers were aware of the need to provide learning experiences that would promote interactions with learners, their narratives of significant incidents in the learning and teaching of reading, writing and oral language often failed to mention a number of the critical components of formative assessment such as feedback and goal setting. Furthermore, the role of learner in the assessment process was given scant attention.

Several areas of concern in regard to teachers' understandings and use of formative assessment were highlighted in an evaluation of the Assessment for Better Learning (ABeL), assessment-related professional development programmes operating in New Zealand during the period 1995-1999 (Peddie, 2000). Based on survey and interview data gained from teachers in 711 participating schools, it was reported that teachers had yet to achieve a genuine understanding of formative and summative assessment. Furthermore, while a moderate percentage of teachers (52%) reported a "high level of success in terms of an understanding of the nature of effective feedback" (p. 57), teachers were generally unable to articulate clearly how they gave feedback to students. In response to these findings, it was recommended that subsequent professional development programmes pay particular attention to
clarifying the nature of formative and summative assessment and developing teachers' understandings of and practice in giving feedback. However, the accuracy of these findings, and those reported by Dixon & Williams (2002), each based on teachers' self-reported practice, needs to be validated through observational data.

**Teachers' Use of Assessment to Support Learning**

Research undertaken during the 1990s provided extensive evidence that in practice, little genuine formative assessment was occurring. Also, if teachers were practising formative assessment they were unaware of it. Often teachers believed they were assessing formatively but in reality they were engaged in on-going or continuous assessment that was used primarily for reporting purposes (Black, 1993; Dixon, 1999; Harlen & Qualter, 1991; Nitko, 1995). Within the New Zealand context, a body of literature highlighted the fact that teachers expended more time and energy in using assessment information for summative rather than formative purposes (Dixon, 1999; Hill, 2000; Williams & Dixon, 1998).

Findings from two longitudinal research projects (Cowie & Bell, 1999; Torrance & Pryor, 1998) have extended understanding of what formative assessment might look like in practice. Informed by extensive observational, interview and documentary data each study provides insights into how teachers used assessment to support learning and teaching. The first study, based in the United Kingdom sought to describe teacher assessment in infant classrooms and identify practice that could be said to constitute formative activity. Based on the findings, Torrance and Pryor developed a convergent-divergent formative framework to describe and explain teachers' practice. It was argued that convergent formative assessment focused on determining if learning had occurred in regard to pre-specified curriculum targets and objectives. From a practice perspective, convergent assessment was characterised by detailed planning, tick lists and can do statements. The use of closed or pseudo-open questions and tasks and a focus on the correction of student errors were other features of convergent formative assessment.
Torrance and Pryor contended that convergent formative assessment reflected a behaviourist view of learning and assessment in that the teacher played the dominant role.

In contrast, when teachers engaged in divergent formative assessment the focus was on finding out what the learner could achieve with support and assistance. The agenda for assessment was driven by the needs of the learner. In practice this meant that teachers focused on miscues and aspects of the learner’s work that would yield information about current understandings and misunderstandings. Divergent formative assessment was characterised by less detailed teacher planning as well as the use of open questioning and tasks. Torrance and Pryor (1998) argued that this form of formative assessment was underpinned by socio-cultural views of learning. Consequently assessment was a joint responsibility. Teachers and learners worked collaboratively, focusing on future development rather than on past achievements. Significantly, convergent formative assessment was the most prevalent type of formative activity observed within the study. There were far fewer examples of divergent formative assessment found in teachers’ practice.

New Zealand research has also provided a detailed description of teachers’ assessment practice, which again resulted in the identification of two kinds of formative assessment activity: planned formative and interactive formative assessment (Cowie & Bell, 1999). Planned formative assessment was comprised of three cyclical teacher actions: eliciting, interpreting and acting on assessment information. It was related to the planning and assessment that teachers developed prior to or during the course of a lesson(s). Brainstorming to find out children’s prior knowledge before commencing a unit study or questioning at the beginning of a lesson(s) to check on children’s understandings typified the activities associated with planned formative assessment. The primary purpose of planned formative assessment was to “obtain information from the whole class about progress in learning ... as specified in the curriculum” (Cowie & Bell, 1999, p. 103) which could then be used by the teacher to inform subsequent teaching.
In comparison, interactive formative assessment was embedded in the learning and teaching that took place during teacher-student interactions. It was needs driven as opposed to curriculum driven and hence, by necessity, “arose out of a learning activity” (Cowie & Bell, 1999, p. 107). As such the nature of information gained was often ephemeral. Based on either, students’ oral responses and questions or on their non-verbal responses as they completed practical activities, teachers endeavoured to notice, recognise and respond to learning needs as they worked with small groups of students or individual learners. Critical was the teacher’s ability to notice and recognise the significance of students’ contributions. The teachers perceived the main purpose of interactive formative assessment as “mediating in the learning of individual students with respect to science, social and personal learning” (Cowie & Bell, 1999, pp. 107-108).

Cowie and Bell (1999) noted that all 10 teachers involved in their study engaged in both types of formative activity, moving back and forth between the two, although at times not consciously aware they were ‘doing’ formative assessment. Significantly, teachers themselves, all of who were secondary school science teachers, attached significance to their content (science) knowledge. They believed that their content knowledge enabled them to notice and respond to students’ learning in both types of formative activity. Even so, all emphasised that responding to and acting on information gained were more difficult processes than eliciting and noticing information. Deserving of mention however is the finding that teachers’ ability to engage in interactive formative assessment was not simply affected by their content knowledge. The teachers commented on other factors that impinged on their ability to engage in interactive formative assessment. Stressful situations such as when new curriculum and assessment requirements were introduced or when teachers were feeling ill or tired were debilitating in this respect. The bureaucratic demands made by an external monitoring and review agency such as the Education Review Office was considered by the teachers to be an additional impingement.
Teachers' Understandings and Use of Feedback to Enhance Learning

While meta-analyses have demonstrated that feedback is the most powerful single moderator in the enhancement of achievement (Hattie & Jaeger, 1998), there is also compelling evidence to illustrate the unintended negative consequences of feedback on achievement and attitudes towards learning. As Kluger and DeNisi (1996) established in their review of over a hundred studies that investigated the use of feedback in educational and workplace settings, the giving of feedback frequently had a negative effect on performance (in more than 40% of the studies reviewed). Such findings can be explained by the fact it is the nature and quality of feedback that is crucial to successful learning. Feedback interventions that cue an individual’s attention to the self (ego-related) are likely to have a negative affect on learning and may lead students to adopt a performance orientation to learning (Tunstall & Gipps, 1996). In contrast, there is a greater likelihood that learning will be enhanced if feedback is focused on the task, or on the processes necessary to complete the task or on the development of self-regulatory processes (Hattie & Timperley, 2007). It has been argued that feedback that is descriptive in nature, that is learning and improvement focused, encourages students to assume a learning orientation. Conversely, feedback that is judgemental and normative promotes a performance orientation (Tunstall & Gipps, 1996).

Several studies have investigated the effects of feedback on learning (Butler, 1988; Day & Cordon, 1993; Hargreaves & McCallum, 1998). In doing so these studies have linked effects to Dweck’s (1989) achievement goal theory. Day and Cordon (1993), for example, found that feedback used to scaffold learners’ responses (suggestions and discussion about improvement) was more effective than feedback that provided learners with the ‘correct’ answer as the latter closed down opportunities for discussion. Feedback linked to the task was found to be far more effective than feedback that was ego involving (such as praise, rewards, general comments) as the former provided learners with a different set of schema by which success and failure could be explained. Of concern were findings from Hargreaves and McCallum (1998), who reported that all too frequently teachers provided students with information about the
surface features of learning, omitting to comment on the substantive features of students' work, and Butler (1988) who found that the possible beneficial effects of specific, diagnostic feedback were negated if accompanied by a grade.

While there are many studies situated in the higher education literature that focus specifically on feedback, there are far fewer that have investigated how feedback works in the classroom (Hattie & Timperley, 2007). One such study is that of Tunstall and Gipps (Black & Wiliam, 1998, 2003; Shepard, 2000). This study attempted to provide "a conceptual framework for [understanding] feedback itself" (Tunstall & Gipps 1996, p. 389). Carried out in infant (junior school) classrooms in the UK and based on observations of teachers' classroom feedback, a feedback typology was created to describe the types of feedback given within classroom settings. Four types of assessment feedback were identified with each type (A, B, C, D) sub-divided to create a dualism. The typology was constructed as a continuum ranging from evaluative to descriptive feedback. At the evaluative end of the continuum (Types A&B), teachers' feedback was characterised as judgemental and normative, concerned with the affective and conative aspects of learning. At the descriptive end of the continuum (Types C&D), feedback was constructed as learning focused. The authors contended that, "feedback changes in style, purpose, meaning and processes as it moves from evaluation to description" (Tunstall & Gipps, 1996, p. 393). Table 2.1 sets out the typology in more detail.
Table 2.1

A Typology of Teacher Feedback (Adapted from Tunstall & Gipps, 1996)

<table>
<thead>
<tr>
<th>Feedback Types</th>
<th>Feedback Outcomes</th>
<th>Evaluative feedback</th>
<th>Descriptive feedback</th>
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<tr>
<td><strong>Type A</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Rewarding (A1)</td>
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<td></td>
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<tr>
<td>Positive personal expression</td>
<td>Specifying specific knowledge of attainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warm expression of feeling</td>
<td>Use of criteria in relation to work/behaviour; teacher models</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General praise</td>
<td>Positive non-verbal feedback</td>
<td>More specific praise</td>
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<tr>
<td><strong>Type B</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approving (B1)</td>
<td>Specifying attainment (C1)</td>
<td></td>
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<tr>
<td><strong>Type C</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Specifying attainment (C1)</td>
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<tr>
<td><strong>Type D</strong></td>
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<tr>
<td></td>
<td>Constructing achievement (D1)</td>
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</table>

While types C and D were both categorised as achievement and improvement focused, Tunstall and Gipps (1996) identified a key difference between the two types in regard to the roles assigned to the teacher and learner in the feedback process. In the C types the feedback between teacher and learner was unidirectional; from teacher to learner. The teacher played the significant role in specifying attainment and improvement and maintained control over the feedback process. In D1 and D2 types of feedback, the learner was assigned a critical role, as attainment and improvement were constructed in collaboration with the teacher. Through skilful teacher questioning and the creation of a...
dialogue, learners were empowered to take more responsibility for, and control over their learning, making judgments and decisions about the quality of their work and how it might be improved. Essentially learners were encouraged to generate their own feedback, to move toward becoming self-monitoring.

According to Tunstall and Gipps (1996), the study's major contribution to the field has been in the creation of the typology. They have argued that the typology is a useful analytical tool for teachers; it provides a language through which feedback practices can be discussed and affords insights into different ways of providing feedback. A shortcoming of the study, however, was in the lack of detail about the incidence of particular types of feedback. While it was reported that there was evidence of all types of feedback in each teacher’s practice no indication was given as to the prevalence of each type. As Tunstall and Gipps noted, future studies could contribute to the field by interrogating individual practice in detail beyond the scope of their study. Several New Zealand researchers have taken up this challenge, utilising the typology as a lens through which to analyse individual teachers’ feedback practice (for example, Knight, 2003; Hawe, Dixon & Watson, 2008).

One study (Knight, 2003), examined the provision of oral feedback to students during the teaching of numeracy. The other (Hawe et al., 2008) investigated teachers’ oral feedback practices within the context of teaching written language. While both were small-scale studies, the data gathering techniques employed ensured that a rich description of teachers’ use of feedback could be gained. Each used a series of observer-participant observations supplemented by individual semi-structured interviews with teachers. Findings from both studies revealed that there were problematic aspects to teachers’ feedback practice. Knight, for example, found that the majority (291/349 instances) of teachers’ oral feedback was evaluative. There was little evidence of descriptive types of feedback being used.
In contrast to Knight (2003), Hawe et al. (2008) discovered that teachers did provide descriptive types of feedback to students during the teaching of written language. However, in the main, teachers' feedback comments specified attainment (C1) or specified improvement (C2). Few instances were seen of teachers creating opportunities for students to take an active involvement in the feedback process through the use of feedback that would either construct achievement (D1) or construct the way forward through mutual critical appraisal of work (D2). Also, all instances of D1 and D2 feedback types were confined to one teacher's practice. Hawe et al. argued that over-reliance on teacher-supplied feedback meant that students had limited opportunity to develop the evaluative or productive knowledge and expertise necessary to become self-monitoring (Sadler, 1989). The conclusion was drawn that while teachers understood the importance of work-related feedback to enhance achievement, the role of the learner in the feedback process was neglected.

Given that the primary purpose of feedback is to effect improvement through the closure of a learning gap, findings from research studies specifically focused on feedback in written language suggest that teacher feedback has been less than useful in assisting students improve their writing (Muncie, 2000). While the revision and improvement of work during production is central to the writing process (Faigley & Witte, 1981; Sadler, 1989), an inordinate amount of consideration has been given to surface features in regard to revision. Rather than treating students' written drafts as works-in-progress there has been a tendency for teachers to deal with these as finished works (Hyland, 2000). As a consequence, the focus of feedback has been corrective rather than developmental with reference to the more substantive, deep features of written language (Hargreaves & McCallum, 1998; Hyland, 2000). Within the New Zealand context, it has been reported that feedback about students' writing has lacked specificity in relation to a given task, been devoid of constructive critique and has focused on the affective aspects of performance (Ward & Dix, 2001, 2004).
Teachers' Understandings and Use of Dialogue in the Promotion of Learning

Language is now considered a tool not only to convey meaning but also to evoke meaning through the provision of critical dialogue that will help students re-examine and modify their original constructions (Wheatley, 1991). The creation of dialogic opportunities with students is crucial (Begg, 1995; Bell & Gilbert, 1996) so that misunderstandings, miscues or unanticipated responses are identified, for it is the identification of such responses that enables the teacher to plan ways in which these misunderstandings can be modified (Gipps, 1994; von Glaserfeld, 1989; Wheatley, 1991). From the learner's perspective, increased participation in substantive conversation can lead to the achievement of shared meanings that, in turn, will lead to appropriation and new learning. Unger (1994) has argued deep learning can occur only if there are multiple opportunities for learners to engage actively in discussion and dialogue. To achieve this, teachers must be both willing and able to elicit responses from learners during learning-teaching episodes with the aim of stimulating further learning (Torrance & Pryor, 1998; Wiliam, 1998, 1999) rather than with the intention of checking what has been learned. This change in focus and intention requires teachers and learners to rethink the role of questioning, feedback and dialogue in learning and teaching (Buhagiar, 2007).

Although teacher questioning has the power to stimulate student learning it is not always used in this way. Gipps (1994) contended that teachers use questions as a means of social control rather than as a stimulation to intellectual functioning. Recent studies on the use of questioning in classroom settings have provided findings which will need to be addressed in the future if questioning and dialogue are to be used to provide useful insights into students' thinking and if students are to become active participants in the processes of learning and assessment. It has been found that frequently teachers' questions close down opportunities for discussion (Carnell, 2000; Torrance & Pryor, 2001). Teachers have not afforded students enough time to think about and formulate answers to questions (Black & Wiliam, 1998).
Moreover, teachers’ use of lower order questions not only evoked lower order cognitive responses but also the production of a right answer (Torrance & Pryor, 1998). Closing down opportunities for discussion resulted in students having little opportunity to use their existing knowledge in understanding new material (Leat & Nichols, 2000).

The pervasive nature of traditional forms of teacher talk and interaction within classroom settings was a major finding in a recent, large-scale, UK based study that examined the nature of classroom interaction during the teaching of literacy and numeracy (Smith & Higgins, 2006). Based on detailed classroom observations it was revealed that students had few opportunities to engage in sustained and extended dialogue with either their teacher or peers. Despite strong moves in the UK to make classroom interactions less teacher dominated and more student-centred, the pattern of classroom interaction continued to “mirror the tripartite initiation-response-feedback (I-R-F) sequence first identified as common to the structure of classroom interaction first identified by Sinclair and Coulthard in 1975” (Smith & Higgins, 2006, p. 489). In the majority of lessons observed, students’ participation in discussion was superficial. The teacher controlled the nature and scope of a discussion. While at times there was a veneer of openness to student contribution, this was counterbalanced by a teacher’s need to bring a discussion back in line with the planned outcomes for a lesson. Essentially, students’ responses to teachers’ questions were restricted to a range of ‘allowable’ answers. Few instances were found of willingness on teachers’ parts to abandon a “recitation script” and encourage a “more symmetrical distribution of talk where pupils talk was noticeably more in-depth, exploratory and speculative” (p. 489). In isolated cases of the latter, teachers did not ask all the questions or provide all the answers. Through the use of peer comment and feedback, student voice was legitimised as they were invited to review, discuss and debate peers’ contributions and productions. In these ways students were encouraged to engage in a dialogue about their learning.
The need for feedback to create dialogic opportunities for learners has been strongly emphasised in the literature (Askew & Lodge, 2000; Carnell, 2000; Sadler, 1989; Torrance & Pryor, 1998, 2001; Tunstall & Gipps, 1996). Dialogue has been described as a “two way exchange and a criss-crossing of ideas, thoughts, opinions and feelings” (Anderson, 1999, p. 50). As Carnell (2000) has noted when a dialogue occurs, notions of equality, reciprocity, spontaneity, and collaboration are in evidence. Power is shared with learners as they are given greater control over and responsibility for making judgements and decisions about their work. In addition, participation in a dialogue with a more ‘expert other’ affords students with insights not able to be attained individually (Senge, 1990).

To create dialogic opportunities teachers need to utilise the D1 (constructing achievement) and D2 (constructing the way forward) feedback types as described by Tunstall and Gipps (1996). Through the co-construction of D type feedback students move away from being reliant on teacher-supplied feedback. Rather they are involved in intelligent self-monitoring. In this way students are encouraged to become insiders in the feedback process (Sadler, 1989). Significantly, in both of the New Zealand studies that have utilised the typology (Knight, 2003; Hawe et al., 2008), the use of D1 and D2 types of feedback was, in the main, absent from practice. Students were, therefore, denied opportunities to become ‘insiders’ in the feedback process and to exert agency in their learning (Hawe et al., 2008).

**Teachers’ Willingness to Share the Responsibility for Assessment**

The need for students to take an active role in the assessment of their learning through participation in peer and self-assessment has been championed in the assessment for learning discourse. Research however has shown that teachers have been less than willing to devolve this kind of responsibility to learners (Buhagiar, 2007). There has been resistance to the idea of giving students the chance to participate in self-assessment (Sebatane, 1998). It has been observed that even teachers who are serious about assessment provide limited opportunities for students to self assess (Black & Wiliam, 1998). If they do,
the learner’s contribution is tentative and given scant attention (James, 1990; Weeden & Winter, 1999).

A New Zealand study undertaken by Bourke (2000) revealed that while self-assessment was utilised as an assessment method within classrooms, its potential usefulness as a means by which students could become involved in and take responsibility for their learning, was negligible. Self-assessment was implemented in a superficial way and not really focused on enhancing students’ learning. Findings from a qualitative, case study undertaken in the context of higher education and second language learning in New Zealand (Hyland, 2000) support the contentions made by Bourke. Although Hyland’s study focused on peer rather than self-assessment, she like Bourke found that peer assessment was not used to its potential. Using a variety of data gathering techniques over a three-month period, Hyland examined the incidence of peer and teacher supplied feedback given to writers and its effects on students’ writing. While both lecturers involved in the study had incorporated formal and informal peer feedback opportunities into their class sessions, they voiced ambivalent feelings about the usefulness of such activities. Moreover, in the formal instances of peer feedback, lecturers were observed taking control over and dominating the feedback sessions. Little credit was attributed to students’ abilities to contribute to the feedback process as it pertained to the revision process. This resulted in students making limited and restricted contributions during the formal feedback process. As a result, from students’ perspectives, the formal peer feedback opportunities afforded them were of little help. In contrast, during the informal peer feedback situations that occurred within class sessions, but outside of the influence of the lecturer, students were observed taking the responsibility for helping their peers make substantive improvements to their work. These informal feedback sessions were considered by the students to be the most helpful.

*Teachers’ Understandings of the Evolving Assessment Discourse*

In responding to the major review of the research into formative assessment (Black & Wiliam, 1998), Sadler (1998) noted that, “contrary to what might be
expected after several decades of research, there remains much that is unresolved and problematic and much still to be done" (p. 78). Three years later, in tracing the historical development of formative assessment, Black (2001) argued that:

"... its emergence to maturity has been a slow and tortured development, in part because its vision has been clouded repeatedly by the interference of summative testing, in part because it locates the functioning of assessment more closely within the complexities of pedagogy" (p. 74).

As the research evidence reported in this chapter has shown, a number of key practices essential to assessment for learning are neither well understood by teachers nor well used in the promotion of learning. Furthermore, in the main, teachers are yet to make a major shift in their thinking about their roles and those of learners in learning and assessment. As the research findings have demonstrated, little has changed in regard to the [re]distribution of power and control over learning.

In addition, much has been written about the structural constraints faced by teachers as they have tried to implement assessment policies with competing agendas (Black, 2001; Codd, McAlpine & Poskitt, 1995; Torrance & Pryor, 1995) with little support or acknowledgement from policy makers that assessment for learning is both complex and ambitious and therefore difficult to enact. However, as Elliott (1998) and others have argued, teachers are the primary agents of improvements in education and hence educational change is dependent upon the "reflexive and discursive consciousness of teachers" (p. xiii).

The distinction between the terms 'discourse' and 'Discourse' (Gee, 1999) is useful to understand the evolving assessment discourse and the reasons why teachers have faced difficulties in regard to its enactment. Discourse with a lower case 'd' is focused on language and linguistics. In contrast discourse with a capital 'D' is a more expansive term, used to accentuate a broader
socio-cultural conceptualisation of discourse. According to Gee (1998) there are both primary and secondary Discourses. Whereas a primary Discourse is acquired early in life and is associated with the construction of a personal identity, secondary Discourses are acquired later in life as one participates in the numerous institutions that comprise the community at large. Schools are one such institution. Either way embedded within a Discourse are taken for granted and tacit theories of what counts as a ‘normal’ person. As such a Discourse integrates “words, acts, values, beliefs, attitudes and social identities” (p. 7) to the extent that there are appropriate ways to act and talk. While a Discourse is concerned with certain objects and promotes particular concepts, viewpoints, values and relationships at the expense of other competing Discourses (Gee, 1998) all Discourses are a product of history. A Discourse, as a dynamic entity, is open to challenge from both within and outside of the Discourse (Gee, 1996; Helsby, 1999). What, at one particular point in time, may constitute the ‘right’ way to think, feel, behave and act is replaced as the Discourse both reflects and constructs the social world (Rogers, Malancharuvil-Berkes, Mosley, Hui & O’Garro Joseph, 2005).

With particular reference to assessment, over the past two decades a new secondary Discourse has emerged to replace a Discourse, based on behaviourist and psychometric ideas and practices, that was found to be inadequate (Broadfoot & Black, 2004; Brown, 1990; Gipps, 1994; Murphy & Torrance, 1990). Created, in the main, by members of the academy the new Discourse has resulted in new “ways of behaving, interacting, valuing, thinking, believing speaking … that are accepted as instantiations of particular roles by specific groups of people” (Gee, 1996, p. viii). To use Gee’s metaphor, members of the academy have fulfilled the role of ‘masters of the dance’. Teachers however are the key players when it comes to the enactment of the Discourse. Herein lies the problem of enactment (Kennedy, 1999). Teachers have already acquired a multitude of secondary Discourses related to schools and schooling including their role and that of students in the processes of learning and assessment. For many experienced teachers the traditional assessment Discourse may be alive and thriving. Rather than fading
away, it is in all probability the accepted Discourse. How then can teachers be expected to make the move from one Discourse to another, especially if the new Discourse conflicts with or does not resonate with those Discourses currently held?

The belief that one can function within a new Discourse is a pre-cursor to acquisition. However, belief alone is insufficient to achieve mastery. Gee (1996) has argued that a Discourse cannot be learned it can only acquired. Acquiring a Discourse occurs through a process of enculturation, where those who are trying to acquire the Discourse are given ample, authentic and meaningfully opportunities to participate in the Discourse under the guidance of those who can be regarded as ‘masters of the dance’. Utilising the notion of an apprenticeship within a community of practice (Lave & Wenger, 1991), Gee has contended that newcomers to a Discourse need to be scaffolded, coached and guided by the ‘masters’. Through reflective and meaningful interaction with the ‘masters of the dance’ newcomers’ attention can be drawn to the “most fruitful aspects of new experiences” so the ‘right’ patterns embedded within the Discourse are brought to the fore (Gee, 1998, p.15). It is only “as learners discover the ‘right’ patterns and interact with those more advanced in the Discourse than themselves they pick up the cultural models that help them organise and explain the new patterns they are discovering” (Gee, 1998, p. 16).

Teachers can be regarded as newcomers to the new assessment Discourse. While the Discourse has reformulated the boundaries for accepted ways of thinking and acting, teachers have not been part of its creation, yet they are currently charged with its enactment. More importantly, in the main, teachers have not been helped to acquire the Discourse through a process of enculturation. Hence the problem of enactment (Kennedy, 1999) as the majority of teachers have essentially been left on their own to turn what they know about effective formative practice into action. It is only in recent times that a small number of teachers have had access to the ‘masters’ through their engagement in professional development and research projects run by those
responsible for formulating and reshaping the Discourse (for example, Black et al., 2003; James & Pedder, 2006; Torrance & Pryor, 2001). If teachers are to make the new Discourse their own they need greater and more substantial access to 'masters of the dance'.

Chapter Summary

Assessment to enhance learning is a relatively new secondary Discourse created in support of a new purpose for assessment. Like any Discourse, it is dynamic having undergone a number of discursive shifts since its inception. The discursive shifts evident in ongoing iterations of formative assessment and assessment for learning have pushed the boundaries in regard to accepted ways of thinking about and acting in the processes of learning and assessment. Not only has the place and role of assessment in learning and teaching been redefined, the nature and purpose of a number of key strategies associated with learning, teaching and assessment have been re-conceptualised. Moreover, radically new roles and responsibilities have been assigned to teachers and learners.

As national and international research findings have shown, while the Discourse has evolved, its implementation has proved problematic in that teachers have been expected to enact a discourse they are yet to fully comprehend let alone master. A number of key strategies essential to assessment for learning are neither well understood by teachers nor well utilised in the promotion of learning. Furthermore, in the main, teachers are yet to make a major shift in their thinking about their roles and those of learners in learning and assessment. As the research findings have demonstrated, little has changed in regard to the [re]distribution of power and control over learning. Teachers still have a long way to go to understanding and becoming part of the Discourse.

The Next Chapter

In the next chapter a further level of complexity is added to the arguments presented in this chapter. The role of teachers’ beliefs is examined. Particular
attention is paid to the role of teachers’ efficacy beliefs and beliefs about teaching and learning, and how, in combination, these beliefs may influence teachers’ uptake and enactment of current educational reforms.
CHAPTER THREE

The Role of Teacher Beliefs in Teaching and Assessment Reform

All individuals hold beliefs about the world in which they live and their place within that world, including beliefs about their capabilities and capacity to act with personal agency. Significantly, early experiences serve to shape these beliefs and in turn belief structures act as filters to interpret subsequent experiences and information. Although still a road lightly travelled (Pajares, 1992), the role that beliefs play in teaching has been given increased consideration over recent years. Fenstermacher (1979), for example, argued that an examination of teachers’ beliefs was of pressing concern to Teacher Education. In a similar vein, others have contended (Kagan, 1992; Nespor, 1987) that the different meanings teachers ascribe to teaching cannot be understood unless there is a close scrutiny of the beliefs they hold. Cognisant of the pervasive influence of beliefs on practice, more recently, greater attention has been paid to how teachers’ beliefs influence their interpretation and enactment of new ideas and practices associated with various educational reform agendas (Putnam & Borko, 1997).

Hence, this chapter is divided into three major sections. The first section begins by outlining the nature of beliefs including the nature of self-referent beliefs. Particular attention is paid to the construct of self-efficacy (Bandura, 1977). The section concludes with an examination of the iterative function of beliefs. The second section considers the significance of teachers’ beliefs, including their self-efficacy beliefs, and their relationship to practice. The final section of the chapter is devoted to a consideration of the way in which teachers’ beliefs influence their uptake of educational reforms. Given the nature of the current research project, the role of teachers’ beliefs in the enactment of assessment reform is highlighted.
The Nature and Function of Beliefs

Belief Systems

A belief system can be described as a set of conceptual representations about physical and social reality that often contain assumptions or propositions about the existence or non-existence of entities (Fang; 1996; Nespor, 1987). Belief systems comprise both naïve and informed beliefs. Naïve beliefs are those that bear little or no resemblance to, or show little or no evidence of, a theoretical knowledge base. In contrast, informed beliefs are those considered to reflect an accepted knowledge base (Brownlee, Dart, Boulton-Lewis & McGrindle, 1998). Beliefs may be held at a conscious or subconscious level. Also, while it is possible to articulate one’s beliefs, many beliefs remain tacit and unarticulated.

As Rokeach (1968) has noted, not all beliefs within a belief system hold the same significance or importance to the individual. They differ in intensity and power and vary along a central-peripheral dimension. Priority is afforded to beliefs that have a strong connection or relationship to other beliefs. Hence, it is probable that a strongly held belief will have a greater sense of connectedness to other beliefs than one that is less firmly held. While a sense of connectedness is important in regard to the prioritisation of beliefs, it is also important to note that a belief system can be comprised of a set of beliefs that lack internal coherence and cogency and, may also be contradictory in nature (Schutz, 1970).

Self-Efficacy Beliefs

In addition to the beliefs individuals hold about the world in which they live, they also hold beliefs about themselves, their abilities and capabilities. Significantly beliefs about self, commonly known as efficacy beliefs, are “instrumental in defining one’s experience”. They also provide “an avenue through which individuals exercise control over their own lives” (Pajares, 1996, p. 544). Efficacy beliefs focus on what one believes one is capable of, regardless of the competencies, capabilities or skills that one might possess.
As such, efficacy is a future orientated judgement more to do with perception than an actual level of competence (Woolfolk Hoy & Burke Spero 2005).

Published in 1977, Albert Bandura's theory of self-efficacy highlighted the significance of self-referent beliefs in forming and regulating motivation, feeling and action (Morris, 2004). Self-efficacy can be described as an expectancy belief that is goal, task and situation specific. It pertains to an individual's belief in his/her capability to:

"... organise and execute courses of action required to deal with prospective situations that contain many ambiguous unpredictable and often stressful elements" (Bandura, 1981, p. 200).

Comprised of two components, self-efficacy includes an efficacy expectation, which represents the belief in one's ability to perform the desired behaviour and an outcome expectation, which relates to the belief that performance of the behaviour will have a desirable effect. In making the distinction between efficacy and outcome expectation, Bandura accentuated the way in which beliefs about competence influence the choices individuals make and the actions they take:

"Individuals can believe that a particular course of action will produce certain outcomes, but if they entertain serious doubts about whether they can perform the necessary activities such information does not influence their behaviour" (Bandura, 1977, p. 193).

Without a strong efficacy expectation an individual is, therefore, unlikely to take action, even if it is believed that the required behaviour will lead to a desirable outcome.

Bandura (1977) conceptualised individuals as proactive beings whose beliefs about their capabilities play a major role in regulating behaviour and levels of motivation. Developing his theory, he identified four main sources of efficacy belief: mastery experiences; vicarious experiences; social persuasion; and an
individual's physiological and emotional state. Of the four, mastery experiences were considered the most powerful. Such experiences "provide the most authentic evidence of whether one can muster whatever it takes to succeed" (Bandura, 1995, p. 3). Vicarious experiences, in the form of social models, were considered the second most influential way in which individuals' beliefs in their capabilities to master comparable activities could be strengthened. A less significant source was that of social persuasion, being told that one has the capabilities to succeed. Finally, Bandura contended that people rely on "their physiological and emotional states in judging their capabilities" (Bandura, 1995, p. 4). Notwithstanding the source of belief, it was argued that the information an individual gains was not inherently instructive. It was through an individual's cognitive processing that the significance of the "information conveyed by the different modes of influence" (Bandura, 1995, p. 5) could be ascertained.

Over the intervening period since Bandura's initial proposition, the construct of self-efficacy has become the focus of numerous research studies. Despite continuing calls for the use of qualitative approaches to investigate self-efficacy (Brookhart & Freeman, 1992; Munby, 1984; Pajares, 1996; Wheatley, 2005), research studies have typically been quantitative in nature. Notwithstanding the difficulties associated with self-report as a method for gathering information, the strength of an individual's self-efficacy has most commonly been ascertained through self-report (Pajares, 1996; Tschannen-Moran & Woolfolk Hoy, 2001). Furthermore, the majority of studies have considered the correlates or the outcomes of self-efficacy rather than the four belief sources. Concerned with the narrowness of the research approach and its somewhat restricted foci, Pajares (1996) has argued for self-efficacy research to investigate "both the sources and effects of self-efficacy through direct observation" (p. 566). Despite this plea, the lack of attention paid to the four sources of efficacy belief continues to be lamented (Anderson & Betz, 2001). What various studies, located in diverse contexts such as business, health, education and international affairs, have shown however is that self-
efficacy has a pervasive influence on behaviour and achievement (Morris, 2004; Pintrich & Schunk, 1996).

The Function of Beliefs

Significantly, an individual’s belief system serves two crucial functions, which are in themselves iterative. The first function is adaptive. A belief system enables individuals to define and understand their world and themselves. Early experiences shape beliefs and in turn belief structures create ‘intuitive screens’ (Goodman, 1988) which serve as filters to interpret subsequent experiences and information. According to Pajares (1992), beliefs become indivisible from self so that individuals identify and understand themselves by the nature of their beliefs. The second crucial function a belief system performs is that it guides one’s decision-making and behavioural processes. Educators, such as Dewey (1933) and Bandura (1986), have posited that belief systems, in contrast to knowledge systems, are the most influential in regard to the decisions individuals make throughout life and are strong predictors of behaviour. The iterative nature of the two functions that beliefs perform has led some researchers to argue that beliefs become self-fulfilling. Beliefs influence perceptions which in turn influence behaviour that is consistent with, and reinforcing of, the original belief (Pajares, 1992).

Belief systems are less malleable than knowledge systems. They are relatively static in nature and highly resistant to change. Long held beliefs are the most difficult to alter whereas newly acquired beliefs are more vulnerable to change. Hence, belief change is more likely to occur during childhood and adolescence than in adulthood. In fact, belief change in adulthood is a relatively rare phenomenon (Pajares, 1992). Given that beliefs are often private, tacit, unarticulated and deeply entrenched, it is not surprising that individuals neither seek nor require general consensus regarding the validity, aptness or fidelity of their belief systems. Indeed, there is considerable evidence to demonstrate that beliefs continue to persist even when faced with incontrovertible evidence that they are no longer accurate representations of physical or social reality (Pajares, 1992; Nespor, 1987). There is general
agreement that beliefs are not affected or changed by the application of argument, reason or logic (Fang, 1996; Rokeach, 1986). Conversely, there is less consensus in regard to whether belief change follows or precedes a change in behaviour. Some researchers have argued that a change in beliefs must occur before there can be a change in behaviour (for example, Ajzen & Fishbein, 1980). Others, such as Guskey (2002), writing from an educational perspective, have promoted the notion that a change in teacher behaviour that results in improved student outcomes, a state that all teachers seemingly strive to achieve, is sufficiently strong enough to change teacher beliefs.

**Teacher Beliefs**

*The Significance of Teacher Beliefs*

In recent decades the role of teacher beliefs in teaching and learning has become a greater focal point for educational research (Brownlee & Berhtelsen, 2006; Fang, 1996; Guskey, 2002; James & Pedder, 2006; Kagan, 1992; Yung, 2002), although, because beliefs are often considered to be a ‘messy construct’, it is still an under-researched area (Pajares, 1992). The studies that have been undertaken have been based on a number of key assumptions. Firstly, it is assumed that all teachers hold a myriad of educational beliefs, which not only manifest themselves in various forms but also help teachers make sense of their experiences. Secondly, even though these beliefs might be private, tacit and implicit they will have a major impact on the nature of instruction and the interactions that occur within a classroom. Thirdly, investigating the beliefs that define teachers and their work provides valuable insights into teachers’ behaviours and the manner in which their practice is constructed. And, finally, it is assumed that an appreciation of teachers’ beliefs and how they affect practice will assist teachers in enhancing their educational effectiveness.

*The Effect of Early Experience on Teacher Beliefs*

Teaching as a profession is unique in that all who enter the profession have had extensive experience of it, built up over the many years spent in classrooms as pupils. Hence, those who enter the profession already have a
pre-existing set of beliefs about teaching and learning based on, and reinforced by, their own experiences. A raft of research into pre-service teachers’ beliefs has provided persuasive evidence that Teacher Education programmes have little effect in regard to changing those beliefs (Brookhart & Freeman, 1992; Thomas & Pedersen, 2003; Zeichner, 1989). The reasons for this appear to be two-fold. As Lortie (1975) argued so compellingly, the thousands of hours spent in classrooms during childhood and adolescence generally serve as a ‘fertile ground’ for developing educational beliefs of all types and, more specifically, those related to what constitutes a good teacher and good teaching. Further, these beliefs, developed at an early age, act as a filter through which experiences and information provided in Teacher Education programmes are interpreted and subsequently acted upon or ignored. Given the enduring nature of beliefs it is likely that experiences and information that confirm existing beliefs will be acknowledged whereas those that challenge existing beliefs will be discounted (Brownlee et al., 1998; Thomas & Pedersen, 2003). Consequently, “unexplored entering beliefs may be responsible for the perpetuation of antiquated and ineffectual teaching practices” (Pajares, 1992, p. 328).

The Beliefs / Practice Nexus

In practice teachers’ beliefs are embodied in many forms such as their expectations of students, their views of good teaching and effective learning and how success and failure in learning can be explained. While there has been considerable variety in regard to the focus of empirical studies about teachers’ beliefs, findings are consistent in regard to two generalisations: teacher beliefs are relatively stable and resistant to change; and a personal style of teaching, informed by particular beliefs, will be enacted fairly consistently across classes and year levels (Kagan, 1992). In contrast, studies that have investigated the degree of congruence between teachers’ espoused beliefs and their practice have produced contradictory findings and have led to the suggestion that the relationship between espoused beliefs and practice is less than robust (Fang, 1996). Possible explanations for discrepancies between teachers’ espoused beliefs and practices include the effect of outmoded,
unpopular, unarticulated, or contradictory beliefs on practice (Alexander, 1992; Kagan, 1992); bureaucratic requirements and constraints placed on teachers (James & Pedder, 2006); and the broader belief systems that teachers hold, and the influence of other, more central beliefs that are part of that system (Pajares, 1992).

Poulson and Avramidis (2004) make the important point that while teachers’ educational beliefs are individual and idiosyncratic, they have been developed within a socio-historical context where the dominant beliefs of the time will have had considerable influence on their construction. Significantly, many teachers currently teaching in a number of western world countries, including New Zealand, were taught both as pupils, and ‘trained’ as teachers, at a time when behaviourism had its greatest influence on thinking about teaching, learning and assessment. Subsequently, many of these teachers will now be caught in a paradigm shift where conceptions about teaching, learning and assessment have changed radically. For example, reform initiatives of recent decades have advocated for teaching to become student focused, facilitative and interactive. This is in stark contrast to a more conventional and traditional mode of teaching, informed by behaviourist notions, and characterised by teacher control and domination, reductionism of content and the transmission of knowledge from teacher to student. Referring specifically to educational assessment, Broadfoot (2001) has drawn attention to the constraining effect of “historical orthodoxies ... [on teachers’] collective capacity to achieve contemporary educational goals” (p. 110).

**Teachers’ Self-Efficacy Beliefs**

Self-efficacy in regard to teaching develops early in a teacher’s career (Pajares, 1992). Initial experiences are important to this development, as this is the time when teacher efficacy beliefs are most malleable. Hence there is the need for a teacher to develop early on in his/her career, the belief that the actions that will lead to student learning are within the realms of his/her capability. Within the context of teaching, self-efficacy refers to the generalised expectancy a teacher has in regard to his/her ability to influence
students as well as beliefs about his/her ability to perform the professional tasks that constitute teaching (Bandura, 1977). However, given the magnitude and complexity of the teaching act, a teacher’s sense of self-efficacy may not necessarily be uniform across the multitude of tasks he/she is required to perform (Tschanne-Moran & Woolfolk Hoy, 2001) or the different subject matter he/she may be required to teach (Nespor, 1987). Despite these differences, robust efficacy beliefs are critical to teaching (Darling-Hammond, 1998, 2003; Poulou, 2007). Indeed, the strength of a teacher’s efficacy beliefs will affect the magnitude of the goals set and the amount of effort expended to reach those goals. Additionally, efficacy beliefs will influence degrees of persistence and resiliency and whether or not coping behaviours are initiated in the face of setbacks (Evers, Brouwer & Tomic, 2002; Poulou, 2007; Rimm, Kaufman & Sawyer, 2004; Tschanne-Moran & Woolfolk Hoy, 2001).

In regard to teaching, many research studies have considered the correlates or the outcomes of teacher self-efficacy. Some of these studies have been related to teacher disposition and the nature of the attributions made. Tschanne-Moran and Woolfolk Hoy (2001), for example, reported that teachers with high levels of self-efficacy were more optimistic, more enthusiastic and more likely to take responsibility for their successes and failures than their less efficacious peers. Conversely, those with lower levels of self-efficacy were more likely to attribute their success or failure to external factors. Other studies have investigated the relationship between self-efficacy and teacher behaviour in the classroom. Findings from these studies support the contention that efficacy beliefs have a pervasive influence on practice. Teachers who were more efficacious were less likely to be critical when students made errors (Ashton & Webb 1986) and more willing to provide support for and cope with difficult students (Poulou & Norwich 2002). In addition, Ross (1998), in reviewing 88 teacher self-efficacy studies, found a correlation between teachers’ levels of efficacy and the promotion of student autonomy. Those with high levels of self-efficacy utilised teaching techniques that enhanced student autonomy and students’ perceptions of their academic skills and abilities.
Of special interest to the current study are those studies that have investigated teachers’ beliefs about their ability to cope with the changing expectations of teachers and students, embedded in the various educational reforms introduced during the last decade or so. During the late 1980s Guskey (1988) investigated teachers’ attitudes toward the educational reforms being introduced at that time. Teachers’ receptiveness to new ideas about teaching and their willingness to experiment with new methods and implement new practices became the focus of his research. Again, efficacy beliefs were found to be influential. A strong correlation between teachers’ levels of self-efficacy and their attitudes towards innovations was established. Teachers with a strong sense of self-efficacy were more open to new ideas and more willing to experiment with new practices. Furthermore, their outcome expectations were stronger. These teachers were more likely to believe that a change in their behaviour would have beneficial effects for their students. More recent studies have reported similar findings (Evers et al., 2002; Ross, 1998; Thomas & Pedersen 2003; Wheatley, 2005). These findings are significant given the role that teachers play in the uptake and enactment of educational reform.

**The Role of Teacher Beliefs in Accepting and Enacting Educational Reform**

It has been well documented that teachers are the key to the success of current reform movements (Battista, 1994; Proudford, 1998; Thomas & Pedersen, 2003). However, teachers’ beliefs play a significant role in regard to their willingness to take up and enact new curriculum approaches and techniques. It must be recognised that the iterative nature of belief construction as well as the enduring nature of beliefs may prove to be a major impediment to the implementation of reforms in ways consistent with the philosophies underpinning them. While teachers may adopt practical aspects of a particular innovation, their tacit beliefs about teaching and learning and the roles and responsibilities of teachers and learners in each of these processes, may preclude them from making substantive curricula or pedagogical change. As Kagan (1992) has noted, teachers’ personal beliefs act as the “filter and foundation of new knowledge” (p. 75). Within the context of teacher
professional development and learning, learning will be facilitated for those whose beliefs are congruent with the ideas underpinning current reforms. Conversely, teachers' 'brittle' beliefs (Kagan, 1992) will function to impede teacher learning. New knowledge or practices that prove to be inconsistent with teachers' personal beliefs will be either rejected or 'domesticated' (Yung, 2001) to the extent that they can be assimilated into existing conceptions (Pajares, 1992).

Referring to the current educational reforms, Wheatley (2005) has contended that a teacher's desire to maintain feelings of individual efficacy may be a strong disincentive to adopt facilitative and interactive pedagogical practices. Moving away from a traditional mode of teaching toward a student centred approach may be perceived by some teachers as decreasing their individual efficacy as they no longer feel 'in control'. Furthermore, a teacher's outcome expectation may affect his/her motivation to use the advocated strategies and practices. While protagonists of the reforms may promote particular strategies and practices, it is unlikely that teachers will take these on board unless they believe that such practices will produce desirable effects for students. However, it must also be remembered that without a strong efficacy expectation, 'I can do this', an individual is unlikely to take action, even if it is believed that the required behaviour will lead to desirable outcomes (Bandura, 1977).

Teachers' Beliefs and Assessment Reform
Many countries in both the Northern and Southern hemispheres, including New Zealand, have been concerned with making changes to assessment policy and practice with the expressed intent of improving teaching and enhancing learning. The promotion of assessment for learning practices is evident in national policy statements and in the focus of associated, assessment-related professional development programmes (for example, Ministry of Education, 2001; 2004). Also in many countries, as has been the case in New Zealand, the dissolution in secondary education of a traditional examination structure and its replacement with a system of internal assessment has been seen as a
crucial way in which assessment can be integrated into teaching and learning. While the examination of teacher beliefs is considered an area worthy of investigation there are only a few studies focused specifically on teacher beliefs and the introduction of new assessment requirements. Two studies have particular relevance to the current work, as each investigated teacher beliefs in relation to new assessment approaches that teachers had been required to implement (James & Pedder, 2006; Yung, 2001, 2002).

Using a narrative approach, the first study of relevance (Yung, 2001, 2002), investigated the relationship between teacher beliefs and practice within the context of secondary school biology teaching in Hong Kong. Participants in the study were 10 biology teachers who had been required to implement a new internal assessment scheme known as the Teacher Assessment Scheme (TAS). Data were gathered through 40 classroom observations, four from each teacher, with each observation lasting between two to four hours. Observational interviews were also undertaken with the intention of probing teachers’ pedagogical decisions as well as their associated thinking and beliefs. Other interviews were conducted to gain insight into teachers’ views of practical work in science, teaching, learning and assessment.

Findings from Yung’s study (2001, 2002) showed that although all teachers had implemented the new approach to assessing students’ practical knowledge, albeit because they were required to, they did so in markedly different ways. In turn, the ways in which teachers undertook the practical assessments resulted in vastly different opportunities and outcomes for students. Yung (2002) has argued that teachers’ varying approaches to implementation were influenced by their beliefs about: what it meant to be a teacher, including the teacher’s role in helping students learn; the students’ role in, and responsibility for, learning; the nature of the relationship between teacher and students and how this should manifest itself in classroom interactions, both when teaching and assessing; and the role and place of assessment in teaching and learning. Other findings of significance were that a
number of the teachers did not understand the philosophy and intentions behind the new form of assessment and thus struggled to make sense of their changing roles and responsibilities. And, for some teachers, as contradictory beliefs about teaching and assessment came into play, the expectation that they should both teach and assess their students created tension.

Yung (2001) concluded that teachers’ implementation of the new assessment approach was guided by their beliefs and personal theories of teaching and learning built up over time to form a deep level of ‘calcified experience’ (Sanger, 1990). In a number of cases, teachers ‘domesticated’ the system of internal assessment to fit in with their beliefs and established practices. Their beliefs and personal theories caused them to implement the new assessment approach in ways that were not only incompatible with the philosophy and intent of the innovation, but also detrimental to students’ learning. It was argued that teachers must have an understanding of the philosophy underpinning an innovation. The need for teachers to be assisted in making their tacit beliefs explicit was also emphasised. Unless deep-seated beliefs are exposed, challenged and destabilised, Yung contended that current reform movements would fail because substantive curricula and assessment change would not occur systemically. Yung’s findings are particularly pertinent for the current study. They highlight the variation between teachers in regard to the implementation of new requirements, illustrate the role that beliefs play in the enactment of those requirements and provide a possible explanation for the variation.

The second study of importance is that of James and Pedder who since 2002, have been engaged in a large-scale, longitudinal study based in England, entitled the Learning How to Learn Project (James and Pedder, 2006a). A major aim of the project has been to understand the conditions that support teachers to develop students’ knowledge and practices in learning how to learn through the implementation of assessment for learning practices. Importantly, James and Pedder hold the position that it is necessary to investigate not only teachers’ practices to determine what constitutes effective implementation of
assessment for learning practices but also, what they refer to as, teachers’ values. Accordingly, a salient aspect of the project has been an exploration and analysis of the value teachers placed on specific classroom assessment practices related to assessment for learning and teachers’ perceptions of the congruence between their espoused values and actual practice.

To generate relevant data, the first part of a three-part questionnaire was devoted to classroom assessment. Utilising conceptual and empirical insights gained from the literature on classroom assessment, a bank of thirty items was constructed. It was expected that those completing the questionnaire would make two likert-scale responses to each item. The first response was in regard to teachers’ assessment practices and the second in relation to the value placed on those practices and how important a given practice was in creating opportunities for students to learn. Through the use of the two likert-scales (practice/values) it was anticipated that teachers’ perceptions of current practice would be elicited, the value placed on specific practices established and gaps between current practice and their value identified.

Subsequently, the questionnaire was administered to staff in 43 infant, primary and secondary schools across five local education authorities. Over 1018 completed questionnaires were returned, representing a 73% return rate. Important to note is that, for the analysis of the classroom assessment section of the questionnaire, data from only 558 of the completed questionnaires were utilised. These data represented teachers whose main responsibilities were confined to the classroom. James and Pedder (2006a) considered this an important and interesting group of teachers in that, unlike some of their peers with managerial responsibilities, they would not have had a formal role in promoting assessment for learning but would be the group most likely to have a major role in its enactment in the classroom.

Questionnaire data were subjected to item, factor and cluster analyses. Analyses conducted at the item level indicated that over 83% of teachers placed a high value on practices that encouraged discussion and clarification
of learning outcomes and criteria for success with students; focused on formative feedback; and enabled teachers to use open questions. Practices that enabled students to build on their strengths, think critically, self-assess and develop independence were also assigned a high value. In contrast, practices such as the use of: closed questions; marks and grades to report achievement; summative feedback and ego-focused feedback were assigned a low value. Also included in the least valued category were those practices that provided opportunities for students to set their own goals and assess the work of their peers.

Whilst teachers may have assigned a high value to a particular practice teachers themselves reported a lack of congruence between their assessment values and their practices in a number of areas. Marked gaps between levels of value and self reported practice ranging from +39% to +19%, were noted in the following areas: discussing with students ways to improve how to learn; involving students in important decisions about their learning; the incorporation of self and peer-assessment opportunities into classroom programmes; and helping students to become independent learners.

Factor analysis of teachers' item responses established three dimensions of assessment, subsequently labelled as 'making learning explicit', 'promoting learning autonomy' and 'performance orientation'. Significantly, in regard to the first two dimensions, 'making learning explicit' and 'promoting learning autonomy' levels of practice lagged behind levels of value. Practice was inconsistent with the high degree of value teachers attributed to these two dimensions. Important to note, the highest values/practice discrepancy was for dimension two: 'promoting learning autonomy'. For dimension one, 'making learning explicit', the disparity between values/practice was lower. In contrast, levels of practice were ahead of teachers' values in relation to the third dimension, 'performance orientation'. In this dimension teachers were reportedly pushed to levels of practice in excess of what they valued in regard to the promotion of student learning. They spent time engaged in assessment practices associated with curriculum coverage and summative approaches that
they considered to be of little value, but necessary to meet bureaucratic demands.

Cluster analysis provided insight into the differences between teachers in regard to the values/practice gap. Five clusters of teachers were identified, each with distinctive profiles derived from their classroom assessment practices and mean value scores. Analysis of variance revealed that there were significant differences among the clusters for each of the three dimensions: ‘making learning explicit’; ‘promoting student autonomy’; and ‘performance orientation’. In several clusters there was an indication that teachers were sustaining practice across all three dimensions that were congruent with their values. In other clusters this was not so, with a lack of consistency noted in either one or two of the dimensions. In one particular cluster, there was evidence to suggest that teachers were struggling to put their values into practice across all dimensions. Noteworthy was the finding that the majority of teachers found the promotion of student learning autonomy difficult to achieve with low practice scores reported from all but one cluster of teachers. Indeed, the largest values/practice gap was recorded across this dimension. This is a finding of considerable importance, given what is known about effective learning, the need for learners to be active and independent and the expectation that teachers will promote student agency and autonomy in learning.

The conclusions drawn by James and Pedder (2006a) have relevance for this study in that they highlight not only the values/practice divide across three important assessment dimensions: ‘making learning explicit’; ‘promoting learning autonomy’; and ‘performance orientation’ but also the considerable differences between teachers in regard to the values/practice divide in each of the three dimensions. Further, attention is drawn to the difficulty teachers faced in regard to the enactment of particular practices even when they were highly valued. Especially challenging was the implementation of practices that required a fundamental change to the teaching / learning contract. Promoting student autonomy, which necessitates a reformulation of the teaching /
learning endeavour so that control is shared between teacher and student, proved the most problematic for teachers. Finally, the impact of bureaucratic requirements on teachers' practice cannot be under-estimated, as teachers often felt compelled to implement assessment practices that conflicted with their values.

Chapter Summary
Cognisant that teaching, like all forms of human behaviour, is influenced by individuals' beliefs about themselves and their world, this chapter has considered the nature of beliefs and their role in filtering experience and determining action. Particular attention has been paid to the significance of teachers' beliefs, including their self-efficacy beliefs, to practice, and to teachers' uptake of new strategies and approaches as promoted within various educational reform agendas. Utilising findings from two recent research studies (James & Pedder, 2006a; Yung, 2001; 2002), the way in which teachers' beliefs influenced their interpretation, uptake and enactment of new assessment requirements has been reported.

The Next Chapter
Chapter Four presents the theoretical framework that informed the present research. This chapter provides a detailed description of Sadler's (1989) theory of formative assessment and feedback and its impact on research and practice, as well as a justification for the use of the theoretical framework in the current study.
CHAPTER FOUR

The Theoretical Framework Informing the Study: Sadler’s Theory of Formative Assessment and Feedback

In social science research, theory can either precede data or it can emanate from it (Wolcott, 1992). In the current research, a comprehensive, well-respected theory of formative assessment and feedback (Sadler, 1989) informed both the collection of data and its analysis. To provide the audit trail necessary to ensure the dependability of the current research (Schwandt, 2001) this chapter is devoted largely to an explication of Sadler’s theoretical framework. This includes a detailed exposition of Sadler’s conceptual argument, including an examination of the three conditions necessary for effective feedback. As part of the defense for the selection of Sadler’s framework, the impact of his theory on subsequent research endeavours and on teachers’ practice is then considered. The chapter concludes with a specific justification for the selection of Sadler’s theoretical framework as the conceptual frame for this research study.

Sadler’s Theory of Formative Assessment and Feedback

A theory is a set of principles and propositions that offer an explanation of a given phenomenon (Pring, 2000; Punch, 2005). Theories, however, are dynamic in nature, changing and evolving over time. As new information is discovered, new questions are posed; these questions in turn highlight the inadequacy of, and dissatisfaction with, current explanations (Schunk, 2000). As Miller and Brewer (2003) have noted “theories often explicate new domains, revise understandings of existing domains and offer competing interpretations of them that infuses social research practice” (p. 325). Published in 1989, Sadler’s theorisation of formative assessment and feedback challenged existing understandings and proffered alternative explanations of formative assessment and feedback.
Evidence that feedback seemingly had little or no effect on student learning with regard to effecting improvement appeared to be the catalyst for Sadler (1989) to re-think the nature of feedback and its role in enhancing learning. Developed at a time when the measurement paradigm dominated the assessment landscape, Sadler breaks new ground in outlining and promulgating a coherent and cogent theory of formative assessment (Brookhart, 2004). Discarding the notion that the reason for feedback’s lack of effect lay with the learner, he hypothesises that it is the instructional system itself that is deficient. Hence, his theoretical exposition sets out the conditions necessary if feedback is to fulfil a formative function, that is, to effect improvement.

The Formative and Summative Purposes of Assessment

Neuman (2003) has argued that to advance knowledge and understanding, concepts central to a theory, and their relationship to, and inter-connectedness with other concepts, must be articulated in a rational and reasoned manner (Neuman, 2003). Although not the first to do so, Sadler (1989) applies the notions of formative and summative evaluation (Scriven, 1967) to student learning (Brookhart, 2004; Newton, 2007). His theoretical exposition begins with a comparison between formative and summative assessment. In doing so each notion is defined, the purpose of each identified and the difference between the two explained. Formative assessment is described as that which is concerned with learning. Its central purpose is to shape and improve student competence. In contrast, he argues that summative assessment, concerned as it is with summarising and reporting achievement, does not have an immediate impact on learning. Given the different purposes, the argument is presented that formative and summative assessment are separate entities and that formative assessment needs a “distinctive conceptualisation and technology” of its own (Sadler, 1989, p. 120). Highlighting what he considers the critical points of difference between formative and summative assessment, purpose and effect, his theory exposes that which has previously been hidden misunderstood or misinterpreted. Sadler’s emphasis on purpose and effect
rather than on timing serves to expose the significant point of difference between the two.

**Formative Assessment and Feedback**

Sadler (1989) argues that, traditionally, the purpose of feedback, based on a behaviourist stimulus-response model, has been to provide the learner with an evaluative judgement about performance in the form of knowledge of results. He challenges traditional explanations such as the one provided by Kulhavy (1977) about the nature and role of feedback in learning, arguing that feedback expressed as knowledge of results fulfils a summative purpose and as such it is insufficient in regard to helping students effect improvement. He claims that feedback is a critical strategy that should be used to shape and improve student competence. In doing so Sadler identifies a pivotal role for feedback in the processes of learning and assessment.

Building on the earlier work of Ramaprasad (1983), feedback is defined in a way that highlights its formative function; that is, feedback has to be considered not in regard to its informational content but in relation to its effect. Feedback or information that is shared, but not acted upon, cannot be considered feedback. Such feedback is little more than ‘dangling data’. For feedback to perform a formative function it has to be **used** to effect improvement. It has to enable **students** to monitor the strengths and weaknesses of their performance in regard to what is expected and to modify or improve aspects of a performance that have not yet reached the desired standard. Essentially, feedback should help the learner to close the gap between current and desired performance. Also, it should assist students to become self-monitoring. A salient aspect of Sadler’s (1989) argument is that students should not rely on teachers’ feedback to tell them how to effect improvement. Rather, students need to develop the knowledge and expertise to make improvement-related decisions. However, before feedback can begin to serve this more complex, formative role, students have to: possess a concept of the standard or goal to be aimed for; compare actual performance with the standard; and engage in appropriate action that will lead to some closure of the gap.
Sadler (1989) re-conceptualises not only the nature and purpose of feedback in formative assessment (Black, Harrison, Lee, Marshall & Wiliam, 2003; Gipps, 1994) but also the nature of the feedback process itself. He challenges the view that feedback is the transmission of information from teacher to learner, controlled and dominated by the teacher. The notion that learners are passive recipients of feedback information, both willing and able to adjust performance as required is rejected. Rather, learners are seen as having a central and active role to play in the processes of learning and assessment. To enable learners to take on this more active role teachers and learners need to work together to form a partnership, whereby teachers' guild knowledge, traditionally held by them in unarticulated form, is made transparent and accessible to students.

The Conditions Necessary for Feedback to be Effective

Sadler's (1989) detailed exposition of formative assessment emphasises the need to put the communication of standards and strategies to effect improvement at the heart of the feedback process (Torrance & Pryor, 1998). Drawing on key notions promoted in the self-regulation and the goal achievement literature, it is argued that three conditions have to be satisfied if feedback is to move students towards becoming self-monitoring. Significantly, the three conditions are not seen as sequential steps. Rather, they are conceptualised as conditions that need to be satisfied simultaneously, as learning is occurring. Furthermore, these conditions can only be realised if students have access to teachers' guild knowledge about what constitutes a quality performance. Teachers' guild knowledge is defined as knowing what constitutes a quality performance, built up over time through the experience of making qualitative judgements about students' work.

Condition 1: Communicating standards to students

Utilising what was known about goal achievement theory, Sadler (1989) argues that the goals of learning and the expected standards of performance have to be made explicit to students. Traditionally, students have been denied access to this knowledge. While the teacher may have guild knowledge, albeit at times, held tacitly, it has not been an expectation that this will be shared
with students. Sadler argues that for feedback to be effective teachers must make their guild knowledge accessible to students, so that in time, "students hold a concept of quality roughly similar to that held by the teacher" (Sadler, 1989, p. 121).

Drawing on an earlier paper related to standards referenced assessment (Sadler, 1987) Sadler advocates for the use of both verbal descriptors and exemplars as means through which expected standards of performance are made explicit to students. Together they provide "a practical and efficient means of externalizing a reference level" (Sadler, 1989, p. 127). Having knowledge of expected quality is seen as fundamental to the improvement process. Without such knowledge students are dependent on the teacher to make the judgements about the quality of a performance and how it can be improved. Furthermore, students will not be able to monitor the quality of their own work during its production, a key requirement if improvements are to be made.

**Condition 2: Comparing current with desired performance**

Central to Sadler’s (1989) theory is the active participation of students in the processes of learning and assessment. Rejecting the notion that learners are merely consumers of feedback information, he argues that learners must be encouraged to generate feedback information for themselves. They have to be encouraged to become self-monitoring. Students need to develop the capacity to make judgements about the quality of work, based on multiple criteria, during its actual production. They need to compare their actual level of achievement with the expected standard. Acknowledging the difficulty of understanding multiple criteria and how these might be applied to one’s work, and the complexity of making such a comparison, Sadler holds that students will only be able to do this through the acquisition of evaluative knowledge and expertise.

Evaluative knowledge is substantive knowledge of the full set of criteria against which work will be judged and the rules for using this set of criteria. It
involves an understanding of the properties contained within given criteria and how these properties might be exemplified in practice (Hawe, 2000). Evaluative expertise is the ability to make judgements and decisions about work based on the application of multiple criteria. The ‘downloading’ of evaluative knowledge and expertise to students is considered a key responsibility of teachers. Such knowledge and expertise can be caught only through experience gained in authentic settings. It has to be “developed through an inductive process which involves prolonged engagement in evaluative activity shared with and under the tutelage of a person who is something of a connoisseur” (Sadler, 1989, p. 135). In the context of the classroom, the teacher is the connoisseur (Polanyi, 1962) and the students are novices who need support to acquire and understand the teacher’s guild knowledge. It is the teacher’s role, as the responsive expert, to induct and support students into the ‘guild’ thereby enabling students to attain the status of insiders in the processes of learning and assessment.

An authentic way in which students can develop evaluative knowledge and expertise is through the appraisal of others’ work. As such peer-assessment is seen as a critical and necessary strategy to be incorporated into the instructional system. The benefits of incorporating such a strategy into the instructional system are seen as considerable. The appraisal of work similar to their own will enable students to gain insight into and understanding of: the wide range of possibilities and outcomes achieved in any given task; common problems faced in achieving a particular goal; the repertoire of moves and strategies used by others; and how specific strategies might be applied to one’s own work. Additionally, appraising the work of others affords a degree of objectivity, more difficult to achieve when required to make judgements about one’s own work. Essentially, peer-assessment is a pre-cursor to self-assessment. Developing evaluative knowledge and expertise in this manner will support the transition from dependency on teachers’ feedback to students becoming self-monitoring.
While the importance of developing students’ evaluative knowledge and expertise is stressed, this alone is considered insufficient to effect improvement. Moreover, its development is not seen as an end in itself; it has to be "inextricably connected with constructive activity" (Sadler, 1989, p.138). Sadler posits that productive knowledge and expertise needs to be developed alongside evaluative knowledge and expertise. Together, the two skill sets enable students to effect improvement.

Condition 3: Closing the gap between current and desired performance

Evaluative knowledge and expertise and productive knowledge and expertise draw upon two different skill sets. While one is able to evaluate the quality of work produced in regard to an expected standard, the ability to produce work that is qualitatively different from one’s initial attempts is another matter. For Sadler (1989), the development of students’ productive knowledge and expertise is critical if students are to become self-monitoring. He rejects the traditional notion that it is the teacher’s role to tell students how to effect improvement. Uni-directional feedback from the teacher to the student, that tells students what to do or what strategy to use to move work closer to the desired performance is considered debilitating for students. If teachers take control in this way students are not in the position to develop autonomy.

Teachers’ feedback should foster and facilitate learning autonomy. It should enable students themselves to make the decisions about what to do to effect improvement. Consistent with his view of the learner as active and independent, Sadler argues that it is students who have to engage in action to close the gap between current and desired performance. They have to “select from a pool of appropriate moves or strategies to bring their own performances closer to the goal” (Sadler, 1989, p. 138). Most importantly, students have to engage in this activity during the production of work. It is only when students engage in evaluative and productive activity concurrently as work is being produced that improvement can be made.
Summary

Informed by particular assumptions about how improvement in learning occurs, Sadler’s (1989) theory extends the conceptual boundaries about formative assessment and feedback. Through a re-conceptualisation of the nature and role of feedback in learning, feedback is assigned a pivotal role in the improvement process. The identification of three conditions, necessary if feedback is to enhance learning, foreshadow the need for new modes of pedagogy. Students are regarded as active participants and protagonists in learning and assessment. Hence, the nature of the relationship between teacher and students and how this should manifest itself in classroom interactions is redefined. The need for teachers to share responsibility for, and control over learning, with learners is a central tenet underpinning Sadler’s theory of formative assessment and feedback.

The Contribution of Sadler’s Theory to the Field

Sadler’s work has been influential in regard to extending thinking and shaping practice about assessment in both the compulsory schooling sector and higher education. While his work has not focused exclusively on formative assessment, his contributions to this aspect of assessment are considered significant and enduring. His theory of formative assessment continues to be regarded as seminal to the field (Black & Wiliam, 2006a; Daugherty & Ecclestone, 2006; Gipps, 1994) and remains the main theoretical analysis referred to by those writing and researching in the field of formative assessment (Black, 2000; Brookhart, 2004).

Sadler’s Response to Black & Wiliam: Revisiting the Territory

Indeed, Sadler’s (1989) theory of formative assessment was seen as one of the most influential theories underpinning a major, international review of formative assessment undertaken by Black and Wiliam in 1998 (Nichol & Macfarlane Dick, 2006). Synthesising the findings from 578 empirical studies, Black and Wiliam highlighted a number of significant concerns in regard to formative assessment and feedback. While compelling evidence was provided to demonstrate that improving teachers’ formative assessment practice
resulted in significant and substantial learning gains for all students, this was offset by other, less positive, findings. Research reviewed indicated that a number of key strategies associated with formative assessment were neither well understood nor well used by teachers in the promotion of learning (Crooks, 1988). Specifically, in regard to feedback, it was found that often feedback led to little or no improvement in learning and in worst-case scenarios had a detrimental effect on performance (Kluger & DeNisi, 1996).

These less than positive findings led Sadler, one of only seven academics worldwide invited to make a formal response to the review, to comment, that “contrary to what might be expected after several decades of research, there remains much that is unresolved and problematic, and much still to be done” (Sadler, 1998, p. 78). He went on to reiterate his initial contention, that feedback is a critical element in the enhancement of learning and drew attention to the fact that it is the nature of the feedback and how this is communicated to learners that is of particular concern. While these notions were central to his original paper, he took the opportunity not only to reiterate them in his 1998 paper, but also to expand upon them. Contending that an adequate conceptualisation of what needed to happen in the feedback process was a pre-cursor to teachers making changes to their practice, he described the actions teachers take as they engage in the feedback act and the resources they bring to it.

The feedback act
Sadler (1998) describes the feedback act, as a communicative exchange comprised of three elements: noticing, appraising and responding. Firstly, teachers notice a learner’s productive efforts. These efforts exist in tangible forms such as in a piece of work or, alternatively, can be more elusive, as in the case of a student’s oral response. Once noticed, the teacher makes an appraisal of a student’s efforts against a point of reference. The reference point may be explicit and concrete. Or, conversely, it may be a tacit and non-exemplified reference point, held inside the teacher’s head. Typically, an appraisal includes some identification of the strengths and/or weaknesses of
the performance under scrutiny. The final element of the feedback act consists of the teacher making an explicit response to the productive effort. This response can take a number of forms such as a mark, a grade or a verbal comment about the quality of what had been produced.

The intellectual and experiential resources that support the feedback act
Sadler (1998) posits that teachers draw on six intellectual and experiential resources, acquired over the years of teaching, as they engage in the act of feedback. These resources are:

- Knowledge of content and what needs to be learned. This knowledge base helps teachers to recognise the significance of a learner’s response;
- A set of attitudes and dispositions towards teaching and learners. These dispositions guide teachers’ actions as well as their interactions with students;
- Skills related to devising appropriate tasks and eliciting pertinent and revealing responses from learners;
- Knowledge of criteria and standards relevant to the task and a set of expectations of what students should be able to achieve;
- Evaluative skill and expertise, derived from a history of making judgements about students’ responses;
- Expertise in framing feedback statements.

Making reference to the framing of feedback statements Sadler notes that current demands placed on teachers require them to provide more than a simple response to students’ productions such as, ‘this is correct’ or ‘this is incorrect’. More sophisticated feedback statements are now called for. These include descriptive comments in relation to: specific features of the production; pre-established criteria; aspects of quality evident in or absent from a productive effort; suggestions for improvement; or a comparison of the production against a previous performance.
The Contribution of Sadler's 1998 Paper: An Extension of his Original Theory

A theory should always be open to further development. It should be responsive to research findings that provide contradictory evidence (Pring, 2000). Faced with a number of less than positive findings, outlined in the international review of formative assessment (Black & Wiliam, 1998), Sadler (1998) does not abandon or radically change his theoretical position. Rather, he responds to the research findings by adding another layer of detail to his theory to elucidate key aspects of it. His 1998 paper frames the feedback act as a communicative exchange. An examination of the steps a teacher takes to provide feedback and the resources evoked to perform such an act provides a fuller picture of what feedback, as a communicative exchange, looks like in practice. Furthermore, an in-depth description of the role of the teacher is proffered through the six intellectual and experiential resources used by them. Drawing on his earlier argument that students must be encouraged to become insiders in the processes of learning and assessment, Sadler re-emphasises that what teachers "bring to the assessment act must itself become part of the curriculum for students" (Sadler, 1998, p. 82). Teachers must begin to provide opportunities for students to acquire the knowledge and skills necessary to make sound judgements. He contends that it is only when students acquire the intellectual resources similar to those traditionally held by teachers, that their "relatively poor position" in the assessment process (Sadler, 1998, p. 82) will improve.

The Impact of Sadler’s Theory on Research

Neuman (2003) has argued that a theory, once posited, develops into more a comprehensive explanation in two ways. Firstly, a theory is advanced when other theorists unravel the assumptions and propositions inherent in the theory. Secondly, a theory becomes more accurate and extensive when it is integrated with research findings. A perusal of key research projects related to formative assessment and feedback, undertaken over the last ten years or so, illustrates the numerous ways in which Sadler’s theory has been utilised by his peers. A number of researchers have used his theoretical propositions to
inform and guide their research endeavours (for example, Black & Wiliam, 2006; Gipps, McCallum, Hargreaves, 2000; Taras, 2002; Torrance & Pryor, 1998; Tunstall & Gipps, 1996). Whilst it is not possible to provide a detailed explanation of each of these research projects, three have been selected to illustrate the different ways in which Sadler’s contemporaries have used his theoretical exposition of formative assessment and feedback to inform their research.

The first study (Tunstall & Gipps, 1996) created a broad typology of evaluative and descriptive feedback types by utilizing the works of Sadler (1989) and Crooks (1988) as frameworks through which research findings could be analysed and theorized. Their empirical study, one of the few grounded in teachers’ practice, identified eight types of feedback used by teachers in support of learning. Notions drawn from Sadler’s (1989) theory such as the use of sharp and fuzzy criteria against which work can be compared; the use of exemplars to illustrate key features of expected attainment; the joint assessment of work by teacher and student; and teachers’ endorsement of feedback strategies that promote self-monitoring behaviour in learners inform two of these feedback types.

Both researchers and policy makers have given significant attention to the typology. Frequent reference is made to the typology in the literature (for example, Black & Wiliam, 1998, 2003; Shepard, 2000; Torrance & Pryor, 1998). The New Zealand context is illustrative of how policy makers have advanced the framework in an attempt to make changes to teachers’ feedback practice. Promoting the arguments put forward by Tunstall and Gipps (1996), the Ministry of Education has indicated to teachers the importance of using descriptive types of feedback to support student learning. Further, teachers have been encouraged to use the typology as a tool to examine their feedback practices (Ministry of Education, 2001).

Concerned that the claims made for formative assessment, by United Kingdom policymakers, were overstated and under theorised in regard to
learning in classrooms (Torrance, 1993), Torrance and Pryor (1998) undertook an empirical research project to identify and describe how formative assessment was being interpreted and implemented in infant classrooms. Building on the theoretical notions first posited by Sadler (1989), and grounded in teachers’ actual practice, Torrance and Pryor (1998) developed a conceptual framework of convergent and divergent formative assessment. Their conceptual framework, particularly as it pertains to divergent formative assessment, has been recognised as a useful heuristic device to illustrate the potential of formative assessment to enhance learning.

Researchers have not only used Sadler’s work as a lens through which research findings can be theorised and as a basis for creating new frameworks to describe teachers’ practice. Some researchers have taken aspects of Sadler’s work and introduced his ideas directly to teachers and then worked with them to implement these ideas within the classroom context. The third study, described next, adopted such an approach. Funded by the Nuffield Foundation in the United Kingdom and known as the King’s-Medway-Oxfordshire Formative Assessment Project (Black et al., 2003; Black & Wiliam, 2006a), this project focused on teacher professional development. It did, however, have an associated, concurrent research component.

Keen to put into practice what was known about effective formative assessment strategies, Black and Wiliam, worked with a team of researchers and teacher advisers, and 48 secondary school teachers to incorporate a number of formative strategies into teachers’ professional practice (Black et al., 2003). Sadler’s (1989) argument, that students can only achieve a learning goal if they can understand it and are able to assess what they need to do to achieve that goal, was used as the starting point for much of the work with teachers (Black & Wiliam, 2006a). Subsequently, attention was paid to developing student understanding of what counted as quality work and to involving students in the development and modification of criteria. The incorporation of peer and self-assessment processes into classroom programmes was another feature of the project’s work with teachers. Like the
two studies mentioned previously, the results of this research project have been published widely, and disseminated to practitioners on an international scale (Black, Harrison, Lee, Marshall & Wiliam, 2002).

The trustworthiness of a theory is established when it is used by others and when research findings are used to refute, extend or modify that theory (Neuman, 2003; Pring, 2000). Findings from the studies reported here demonstrate that the explanations and assumptions inherent in Sadler’s theory are more than an unrealistic theoretical exposition. Through the application of a number of his key ideas to empirical studies, researchers have been able to verify the efficacy of the theory. Additionally, researchers have been able to extend and modify the notions first put forward by Sadler. Overall, the adoption of the theory as a lens through which studies could be planned and results interpreted, combined with findings grounded in teachers' practice, give credence to the theory. They offer evidence that the theory is a robust explanation of formative assessment and feedback.

**The Effect of Sadler's Theory on Teachers' Practice**

While Sadler has had a substantial impact on the thinking and the work of his academic colleagues, the impact of his work has not been confined to the realms of research. As alluded to above, his work has had a significant effect, both on the expectations of teachers and on their practice (Crooks, 2002; Taras, 2002). One of the implications of Sadler’s re-conceptualisation of formative assessment and feedback has been that traditional modes of pedagogy have no longer been considered appropriate, given the expanded role ascribed to learners in learning and assessment. To enact formative assessment and feedback in the ways proposed by Sadler, teachers have been asked to make radical changes to their classroom practice. These calls have come not only from researchers but also from policymakers (Black & Wiliam, 2006; Gipps, 1994; Ministry of Education, 2001; Shepard, 2000). Teachers are now being encouraged to incorporate Sadler’s three conditions for improved student performance into their pedagogy. In addition, peer and self-assessment
are now considered important and necessary features of classroom programmes (Black et al., 2003).

In a number of Western world countries, including New Zealand, the work of Shirley Clarke has received considerable attention and has impacted on teachers’ practice. Clarke, an educational consultant based in the United Kingdom, has taken Sadler’s notion of communicating standards to students and developed several practical strategies for use in classrooms. A key strategy has been the sharing of learning intentions. Developed as a cognate term for learning goals, learning intentions are the specification of specific learning expectations, framed in a manner accessible to students (Clarke, 2000; Clarke, Hattie and Timperley, 2003). In support of learning intentions, Clarke has introduced the notion of success criteria, as a means through which expectations are made explicit.

The strategies that Clarke has developed have been disseminated widely in New Zealand through teacher professional development programmes such as ‘Assessment to Learn’ (AToL) and in a series of publications written specifically for teachers working in primary, intermediate, and secondary school contexts (Clarke, 2001, 2005). At the invitation of the Ministry of Education, Clarke has been to New Zealand to share her work with teachers. Further, the New Zealand edition of the text “Unlocking formative assessment” (Clarke, Timperley & Hattie, 2003) has been well subscribed to by both primary and intermediate schools.

**The Selection of Sadler’s Framework**

Sadler’s (1989) theory has shaped contemporary thinking with regard to formative assessment and feedback. In turn, this has led to the role expectations of teachers and learners being redefined (Crooks, 2002). Nearly two decades after his theory was first published, teachers are being encouraged to incorporate a number of his key ideas into classroom practice. Thus, Sadler’s theory had to be regarded as central to the current study. It was
considered an appropriate lens through which teachers’ understandings and use of feedback in the support of learning could be analysed and theorised.

Description and explanation represent two different levels of understanding in relation to the data generated from a research project. While a description of findings is a useful and necessary first step in the analysis process, it provides only a partial picture of the phenomenon under investigation. Description alone does not enable the researcher to unravel the complex meanings that people ascribe to their situations. This requires explanation. However, as Punch (2005) has noted, explanation must be tied to theory. It is the integration of data and theory that transforms findings from a description to an explanation.

As previously stated, theory can precede data or emanate from it (Wolcott, 1992). Grounded theory is one of the most widely used interpretive strategies employed in the social sciences (Denzin & Lincoln, 1994). In this approach, theory is generated inductively on the basis of the data. As an approach it is considered particularly appropriate in areas where there is a dearth of theory to explain the phenomenon under investigation. In the current study this approach was contemplated but discounted for three reasons. Firstly, given the existence of Sadler’s (1989) theoretical exposition of formative assessment and feedback, a detailed and comprehensive theory was available for use. Secondly, the theory is both well respected by seminal assessment scholars and well used by more ‘expert’ others in the field, indicating its feasibility as an explanatory tool of analysis. Finally, as already noted, teachers have been encouraged to implement strategies grounded in Sadler’s work. It was therefore anticipated that some of the notions included in Sadler’s theory would very likely be present in teachers’ talk and/or their practice.

Hence, utilising Sadler’s (1989) theoretical framework was judged to be an appropriate way in which data and theory could be integrated, thus enabling analysis to move from description to explanation. His theoretical framework was considered sufficiently comprehensive to analyse the intricacies and
complexities of the feedback process. Specifically, it was conceived of as a framework that would illuminate teachers’ conceptions about the nature and role of feedback in the enhancement of learning; their beliefs about their role and that of learners in the feedback process; and the strategies and practices that teachers utilise and ascribe importance to within the feedback process.

**Chapter Summary**

In this chapter particular attention has been paid to Sadler’s (1989) re-conceptualisation of the nature and purpose of formative assessment and feedback in the enhancement of learning. Through an examination of Sadler’s three feedback conditions, the changing roles and responsibilities of teachers and learners in the processes of formative assessment and feedback have been brought to the fore. To illustrate the comprehensiveness, credibility and respectability of Sadler’s theory, its impact on research and teachers’ practice has been discussed. Finally, reasons have been given for the selection of Sadler’s theoretical framework as the major conceptual frame informing the current study.

**The Next Chapter**

In the chapter that follows, the research process and the associated procedures, utilised to gain insight into teachers’ feedback beliefs and understandings and practices, are described and justified.