

How Four Dynamic Teachers Have Changed the Way they Assess

**‘Put it this way- I don’t sit with a pile of books until 5.30 each night
anymore.’**

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Abstract

For over two decades, New Zealand primary schools teachers have been confused and stressed about assessment. Research carried out between 1998 and 2000 showed that teachers were not assessment literate. They didn't have a good understanding of assessment theory. The political and educational purposes of assessment were in conflict with each other. Teachers were getting mixed messages about what they should be doing. The research found that teachers prioritised summative assessment and assessment for accountability although most teachers could see the considerable educational benefits of adopting formative assessment practices. They appeared to lack an understanding of how to translate such approaches successfully into classroom practice.

Since then most teachers have had opportunities to participate in extensive professional development which has emphasised the place of assessment. Little research has been carried out about how teachers' assessment practices have changed as a result of this and very few studies include the perspective of students.

This study aimed to address this gap in research by establishing how four dynamic, committed teachers, in four different primary school settings, have changed their practices. It looked at how they currently view, understand and manage their assessment practices. The study included interviews with the school assessment leaders to establish the importance of the professional context in which the teachers work. Interview responses from the four teachers were compared with the responses of small groups of children from each teacher's class to probe the related understandings and experiences of the students.

The findings indicated that the teachers had made considerable shifts in their beliefs about assessment in the last six years. They attributed the reason for these changes to be largely the result of professional development and changes in the culture of the schools in which they work. The results of this study showed that the case study teachers had clear understandings of assessment theory, they prioritised formative assessment, they had become proactive in determining what assessment practices were worthwhile and they had reconstructed their classroom cultures to involve students in the assessment process. Each teacher had developed her own personalised assessment programme that included her own unique mix of strategies. They had successfully married their extensive use of formative strategies with the assessment requirements of their schools. They had become more critical assessors who were not prepared to undertake any assessment that they deemed lacked purpose. The case study teachers were enthusiastic about the changes they had made and felt they were better teachers now because of these changes.

Similarly, the students who were interviewed for the study were also enthusiastic about and interested in their learning. They were able to talk about what assessment was for and able

to explain the ways in which the assessment processes in their classrooms were helping them learn.

Acknowledgements

I would like to thank the teachers, the assessment leaders and the students at the case study schools. You participated so willingly and gave me such rich data to work with. To the teachers, I admire you immensely for your dedication, your knowledge of teaching and learning, and your ability to put your professional learning into practice with such skill and to the great benefit of the students with whom you work. You have come a long way from your earlier understandings when you were younger teachers.

The respect you show for the children, your belief in their ability to contribute as partners in their own learning, and the ways in which you interact with them is truly inspiring. What would education be without people like you? You lead the way for others through your constant reflection on your work, the emphasis you place on your own self improvement and your genuine desire to do the best you possibly can to improve the experience of learners. You constantly push the boundaries and work outside your comfort zones. Children in your classes are fortunate indeed.

The bottom line is that being a good educator is about having the ability to make sense of the many intertwined, complex relationships that exist and genuinely caring about children and their learning.

The best assessment practice is not only about informing your teaching to meet the needs of students but also reflects in the way you communicate with your students as you interact with them and help them develop the skills to be successful learners. The four of you know this and you know how to create an environment in which learners can thrive.

I take my hat off!

1. Introduction

This study continues the quest to understand the issues and complexities involved in the assessment of student learning. The field of assessment is a highly complex and demanding component of the role of a present day teacher. Before the 1980s, during the introduction by the New Zealand government of Tomorrow's Schools, few teachers were familiar even with the word assessment, let alone the plethora of teaching practices that it implies today.

So what is assessment, why has it become such an issue and what is it about assessment that is so complex and demanding for teachers?

Crooks (cited in McGee and Fraser, 2001) explains assessment as 'the gathering of information (data) in a wide variety of ways (both formal and informal), collating the information to throw light on a particular decision which is to be made, and using the information to make a decision (p.177.)'

For teachers, the gathering of information in a variety of ways and using it for decision making is not straightforward for a number of reasons. For example, research on assessment has led to many labels for different types of assessment and it has been difficult for teachers to make sense of what these various types of assessment include, how they work alongside each other and which they should prioritise.

This classifying of assessment into types has become a source of tension for teachers. The process has resulted in the labels 'formative' and 'summative' assessment. There has been much debate, over a long period of time, among educationalists about what these terms mean and the position each of these assessment types should have in teaching and learning. However, a well accepted definition of formative assessment is that of Bell and Cowie (1997) which defines it as the process used by teachers and students to recognise and respond to students' learning in order to enhance that learning during learning. Summative, on the other hand, is considered a form of assessment that occurs after a period of learning to show what students have learned. Summative assessment has been characterized as assessment *of* learning in contrast to formative assessment as assessment *for* learning.

The historical background to assessment development in New Zealand.

To understand the relevance and importance of this project it is necessary to take a brief historical look at the development of assessment practices in the New Zealand context. Assessment came to the forefront, as a practice for teachers when the Labour government

legislated that all schools should become self-managing, at the same time as centralised the control of curriculum reform. This era was commonly known as Tomorrow's Schools (1989) and signalled the beginning of two decades of massive, state imposed change, including the implementation of a complete, new, nationally mandated curriculum. A result of the reforms was that outcomes-based education became well and truly entrenched as a practice in New Zealand primary schools.

Teachers had a lot of adjustments to make. They were required to come to terms with new curriculum statements for each curriculum area and show evidence of student progress and achievement across the entire curriculum. Many teachers found the new expectations for school and classroom assessment practices demanding and confusing. At the same time that they were coming to terms with these requirements and the new practices associated with it, they were also made more accountable for proving that students were achieving.

The establishment of the Education Review Office (ERO) meant teachers were visited and had to show their assessment evidence. Most teachers, unsure of what was required and confused about the different messages they were getting about assessment, added new assessments to their existing practices and tried to assess all achievement objectives across the full curriculum. In other words, they emphasised summative assessment and assessment for accountability purposes.

Teachers became overloaded with paper work and generally felt that their assessment practices were taking their attention away from more important aspects of their role. Elley (2004) contended that this period of time 'required unrealistic workloads of teachers, resulted in excessive amounts of assessment to little purpose, produced uninterpretable records of outcomes for accountability purposes and produced large declines in teachers' morale and attitudes to teaching' (p. 105). Teachers became consumed with coverage of the curriculum and the quantity rather than the quality of their assessments.

The practice of assessment has continued to be a source of stress and anxiety for teachers. In fact, O'Neill (2004) asserted that schools now rate assessment practices as the biggest challenge of all the major reforms.

A number of New Zealand educationalists and researchers have been motivated to follow up the confusion that developed in schools about assessment practices. Their studies provide an important background to this study. They are covered more fully in the literature review. Three of the studies (Dixon, 1999; Hill, J. 1998; and Hill, M. 2000) have highlighted important issues that have resulted from the changes brought about by Tomorrow's Schools. Hill J, (1998) found that although most teachers saw the worth of using formative assessment practices in their classrooms they did not have a good understanding of assessment for learning. They were unable to explain how they used assessment in their classes to

promote student learning. They focused on the use of information for summative purposes. The studies also acknowledged the international research that shows that the adoption of formative assessment strategies is a critical factor in the promotion of learning and the raising of standards. The authors all called for professional development to support teachers in developing the necessary assessment literacy to make changes to their practice.

The government, after a trying period of time for teachers, responded to the discontent and the need to enhance the assessment knowledge of teachers by providing a number of professional development contracts to schools. The most relevant of these was the Assess to Learn (AtoL) contract. Also influential in the development of new assessment practices were the Numeracy, and the Information and Communication Technology (ICT) contracts. Improving teachers' assessment practices was an integral part of each of these contracts.

This professional development (PD) has had a direct influence on the subsequent changes that have occurred in assessment practices in New Zealand primary schools since 2000. The contracts have had a strong impact on teachers' understandings of pedagogy and have also been instrumental in the shifts that have occurred in the professional cultures of schools.

While the professional learning teachers have done has offered some support for them to change their assessment practice, it has not been enough. Successful change also relies on teachers gaining a full enough understanding of new pedagogy and believing it is worthwhile. However, the biggest challenge lies in teachers' learning ways of transferring their new learning into their classrooms.

Alongside the provision of PD, the Ministry of Education (MOE) convened a national assessment group and, early in 1999, this group recommended that a range of national assessment tools should be made available. These tools were developed and included revised Progressive Achievement Tests (PATs), the Assessment Tools for Teaching and Learning (AsTTLe) and a series of standardised tests of numeracy.

A fundamental difference between New Zealand primary schools and the primary schools in other countries is that our schools have had relative freedom in deciding which nationally developed assessment tools to use and when and how to use them. Never the less, the political directive that schools must develop school-wide evidence-based practices and analyse data for a number of purposes, including a strong requirement to meet an accountability function, has become an area that most schools have focused on.

New tensions for teachers

A new source of tension had developed for teachers. As a result of the professional development contracts, there has been a strong trend towards teachers using formative

assessment practices such as student goal setting, self and peer assessment, learning focused feedback, learning intentions and success criteria in their classrooms. These practices represent assessment for learning with an educative purpose. Alongside this development is the emphasis on teachers collecting data for school-wide accountability purposes. For example, schools are expected to set annual targets for student achievement and report to the Ministry of Education (MOE) on student progress. This is assessment of learning with a political purpose.

The PD that schools have been able to access or have decided to undertake has also influenced their respective priorities. Schools have moved in a number of different directions but generally towards a similar destination. The destination has been a place of changed pedagogy and the successful implementation of this pedagogy into classroom practice. The tension has been how to do this successfully alongside the move towards evidence-based best practice.

The introduction of the revised New Zealand curriculum (2008) that is mandated to be completely introduced in each school by 2010 is an added factor in the mix of considerations for teachers as they adopt and attempt to further develop the ways in which they assess.

The need for further research

It is clear that there is a strong need for researchers to continue to study the evolution of teachers' assessment practices in New Zealand schools. Very little research has occurred since 2000 about what has happened in schools after the professional development has occurred and a period of time has passed.

Two things are unclear. First, is the matter of how teachers are managing the often conflicting purposes of assessment. Second, there has been little research on how well they are translating their new learning about formative assessment into classroom practice.

Influences on the methodology of the study

The conclusion of Brown (2002), in his study of New Zealand teachers, that teachers' perceptions of assessment are complex, hierarchical, multidimensional and interrelated has influenced the approach taken to this study. He produced evidence from teachers' own thinking that assessment should not be conceived of in a superficial, simplistic fashion. Brown also suggested it would be appropriate to investigate student conceptions of assessment and the mutual and possibly interactive conceptions, of the students and teachers.

In response to these findings, this dissertation includes in-depth discussions about assessment with teachers to gain the richness and complexity of their opinions and

understandings. The dissertation is also designed to begin to probe the understanding of students' perceptions of this relationship by interviewing each teacher and a group of students from her class about their understandings of assessment. Another layer has been added to this by interviewing the school assessment leader. The professional context of the teacher and school-wide expectations for assessment practices also have a profound influence on teachers' attitudes, understandings and behaviours.

The professional interest of the researcher

The researcher is an education reviewer for The Education Review Office (ERO) and, as such, she spends large amounts of time in New Zealand primary schools and classrooms. She has noticed substantial changes in teachers' assessment practices, classroom learning climates and school cultures over the four years she has been in the position. This study is an effort to explore, probe and highlight examples of the best of those practices and to establish how some of our most talented teachers, in supportive school cultures, have changed their practices and how this is impacting on the students in their care.

This study seeks to explore the way four experienced and dynamic teachers, in four different Christchurch schools, are making sense of assessment in 2008 and what the students in their classes understand about assessment.

Research questions

How do four teachers, in four different school settings, view, understand and manage assessment?

How does the professional culture of the school influence the teachers' assessment practices?

What do the students in the classes of these teachers understand and believe about assessment?

Structure of the Report

After this introduction there are five further sections.

1. Section 2 explores the relevant international and New Zealand literature about assessment particularly the most current research.
2. Section 3 explains the methodology and methods used in the research and the procedures used to carry it out.
3. Section 4 reports the findings of the research and is divided into four parts. Part 1 summarises the professional contexts of the four schools. Part 2 is a summary of the findings from the teacher interviews. Part 3 is a summary of the student interviews. Part 4 is a comparison of the teacher and students views. Some discussion of the findings is included within the four parts. This was considered by the researcher as

appropriate in order to allow for specific discussion of each set of findings. Also it allowed for the main discussion in Section 5 to be mainly about the relationship between the findings and the research literature.

4. Section 5 is a discussion of the research against the literature that was explored in the literature review in Section 2.
5. Section 6 includes a conclusion, outlines the limitations of the research and makes recommendations for further research.

2. Literature Review

The purpose of this literature review is to explore the highly complex area of assessing student learning. The review summarises some of the relevant debates about assessment and the tensions these have caused for educationalists and teachers. It explores the conflicting positions and understandings that exist about school and classroom assessment practices and touches on the historical and political influences that have impacted on the development of assessment in schools. The debate about definitions of various types of assessment is discussed to explain the level of confusion that exists for teachers as they endeavour to make sense of assessment theory. The relatively recent rise of formative assessment or 'assessment for learning' is positioned in relation to constructivist teaching approaches, other forms of assessment and socio-cultural theory.

Debates about Assessment

Understanding the educational and political arguments about assessment is very important because assessment, as it is enacted in the classroom, has a powerful influence on the identities and behaviours of both learners and teachers.

Gee (2001) cited in Pryor and Crossland (2008) explains that:

Identities are performed and contested through discourse, where particular combinations of ways of speaking, acting and believing are recognised and privileged in different socio-cultural and historical settings which change over time and space.
(p. 9)

It follows that the pedagogy that teachers use as a basis for the interactions that occur in their classrooms has a profound influence on the developing identities of the students they teach. This pedagogy changes with the prevailing political and social climate of the times and thus shapes student identity in ways that are related to that climate.

Pedagogy and assessment are inextricably intertwined and, therefore, the ways teachers assess learning are also highly influential in shaping learner identity.

So what do we mean by assessment? Educational writers have raised awareness of the changing meaning of the word assessment. Neyland (2007) suggests assessment is a modern word. He maintains that 1980 was the year that assessment was 'carved off from teaching.' Until this time, he contends, the best of what we now call assessment was covered by the term 'good teaching' (p. 116). Neyland associates the rise of the word 'assessment' to the move towards outcomes-based education and attributes this move to the

'unprecedented move of the federal and state governments in the United States of America (U.S.A), to mobilise and scientifically manage education, backed by the power of legislation' (p.119).

Neyland's position on assessment exposes the origin of the tensions that exist and continue to influence the assessment practices of our teachers today. He considers that what is now considered good assessment 'can never fully escape the unpleasant odour of assessment for accountability' (p.120). Neyland positions the 'assessment for better learning' movement as a counter movement against assessment for accountability by those who recognised the harm the new approach to curriculum would cause. It is the tension between these competing discourses that he considers to be responsible for the reshaping of the meaning of the word assessment over recent years.

As assessment became established as a recognised aspect of teaching and learning, a number of debates developed around the often conflicting purposes of assessment.

Formative verses Summative Assessment

Along with the greater emphasis placed on assessment came a plethora of definitions to cover different types of assessment. Ongoing debates occurred around the labelling of different types of assessment. A good example of one of the most contested debates and one that is very relevant to this study, is the debate about 'formative' and 'summative' assessment in education and the position each of these assessment types should have in the process of teaching and learning.

Newton (2007) notes that it was Scriven (1967) who originally drew up the distinction between formative and summative assessment in relation to programme evaluation. Later, Bloom, Hastings and Madaus (1971) extended the distinction to the assessment of student learning.

Bloom et al. explained the distinction between formative and summative as follows:

the main purpose of formative observations... is to determine the degree of mastery of a given learning task and to pinpoint the part of the task not mastered...The purpose is not to grade or certify the learner, it is to help both the learner and the teacher focus upon the particular learning necessary for movement towards mastery. On the other hand, summative evaluation is directed towards a much more general assessment of the degree to which the larger outcomes have been attained over the entire course or some substantial part of it. (1971, p. 61)

The essential characteristic of summative assessment was generally considered to be that it occurred after the learning had taken place, in contrast to formative assessment, which took place during learning to improve it.

By the end of the 1980s, Sadler (1989) contended that the distinguishing feature of formative assessment was the use to which the results were put. Much discussion ensued about the purposes and timing of the two different assessment types and their relative merits.

The debate about formative and summative assessment has continued and researchers and educationalists have not been able to reach full agreement about the definitions of these assessment types, what their characteristics are and whether they are mutually exclusive or whether one instance of assessment can be used for both purposes. Some have suggested that the division is an arbitrary one and that it is the issues that underpin assessment practices, such as the influence of assessment on the way students construct their identity, that are of most relevance to the continued discourse.

Without unpacking the debates around these two labels for assessment any further the two practices have sat uneasily alongside each other for over two decades. The unease is largely because summative assessment is about producing results that supposedly reflect the extent of student learning. Results can be used to judge students' performance and to classify and label them. They can also be used to measure student achievement against expected outcomes and can be compared and used to make judgements about the performance of groups of students as well as the effectiveness of teaching. This accountability function has been fraught with difficulties for teachers and schools because of the tension between implementing assessment that reflects new learning theory and assessment that satisfies such political mandates and expectations.

What is Formative Assessment?

Formative assessment, on the other hand, is more aligned with learning theory. It has a purer educative purpose. Although it became established in theory as a type of assessment that aids the learning process, what did that process actually mean in practice?

Torrance and Pryor (1998) observe that "formative assessment is a construct, a name given to what should accurately be described as a social interaction between teacher and pupil" (p.172). Shepard (2005) relates formative assessment to Vygotsy's concept of instructional scaffolding and therefore considers it to be more about teaching than what is construed as assessment.

Chappuis and Chappuis (2008) point out that:

definitions of formative assessment abound, resulting in multiple and sometimes conflicting understandings. And in part, because of these varying definitions and views, practices labelled as formative assessment in schools today vary widely. (p. 14)

They discuss formative assessment as being an ongoing, dynamic process that:

delivers information during the instructional process, before summative assessment. Both the teacher and the student use formative assessment results to make decisions about what action to take to promote further learning (p. 15).

The Impact of These Debates on Teachers

The difficulties for teachers are clear. Even while the debates go on and the discourse changes, even as the educational experts cannot reach agreement, they as practitioners, are expected to make sense of the new research and make changes to their classroom practices. This is understandably not an easy task but it is also a source of stress and self-doubt for many teachers. The feelings that these tensions engender are well captured in a study by Johnston, Guice, Baker, Malone & Michelson (1995) of United States secondary language teachers when they report that:

most of the teachers in this study were caught in conflicts among belief systems and institutional structures, agendas and values. The point of friction among these conflicts was assessment, which was associated with very powerful feelings of being overwhelmed, and of insecurity, guilt, frustration and anger... this study suggests that assessment as it occurs in schools, is far from a merely technical problem. Rather, it is deeply social and personal. (p.11)

Teachers were caught in a time of such rapid change from traditional models of teaching to socio-constructivist models as well bearing the impact of increasing intervention in the management of schools by the state. As a result, it was no wonder they were confused and disempowered.

As Benton (1999) (cited in Hill, 2000) asserts:

because discourses comprise a set of widely held ideas that society relies on to make sense of the world they are difficult to displace and they continue while new ones are formed and in spite of policies and regulations designed to supersede them. Thus discourses are never static and rarely stable. (p. 50)

In other words, teachers were pulled in a number of different directions but were also trapped in a time warp because they still used traditional practices that, in fact, they were required to by the state for accountability purposes. At the same time, they tried to add new practices while the understandings of these practices were in a state of flux. This meant they could not consolidate their position on assessment at any level.

Changing Models of Teaching and Assessment

If we isolate and discuss the educational changes that occurred, it helps us delve into and make sense of the complexity of the situation teachers were in. As mentioned earlier,

teachers were caught in a time warp caused by the transformation of teaching from a traditional transmission model to a socio-constructivist model. Gipps (2007) describes the traditional model of teaching and learning as one in which the curriculum is seen as a distinct body of information that can be transmitted to the learner. Assessment is seen primarily as testing that is used to assess the ability of students to recall and, to an extent, apply the facts they have learned. In this model, the teacher is the expert and the students are apprentices. Students are the objects of various assessment activities, the results of which are used to make judgements about their knowledge and abilities. Such traditional assessment practices have served to entrench the hierarchical relationship between the teacher and the students.

The new political requirement for teachers to produce assessment information for accountability purposes reinforced the position of this approach to assessment so that it was not displaced by the new educational ideologies that were emerging. Therefore, even if teachers were willing, they were unable to fully discard some of the assessment practices that were associated with the traditional transmission approach and associated teaching approaches because they were a political requirement.

In fact, Pryor and Crossland (2007) claim that the summative assessment that is typified by the transmission approach is still one of the most powerful institutionalised discourses. This is because it creates texts, marks, academic reports and qualifications which legitimise and reify aspects of self in ways that can become self-confirming.

The Relationship between Formative Assessment and Current Learning Theory

Alongside being required to continue some traditional teaching and assessment practices, teachers were making shifts towards new socio-constructivist theories of learning that led to them thinking differently about the purpose of education. Socio-constructivist theories of education are based on the principle that knowledge is social and created in interaction with others. This theory flourished in the 1990s and resulted in dramatic changes to classroom practices. Socio-constructivist theories were well accepted by teachers. This meant that changes to the way assessment was used to support these constructivist understandings were required. The process of assessing the learner became recognised as having a profound impact on the developing identity of the individual. Formative assessment practices were seen to be well aligned to this position.

Pryor and Crossland (2008) acknowledge Gipps as the first to distinguish 'assessment of learning' from 'assessment for learning' because she saw a good fit between constructivist learning theories and formative assessment practices, whereas summative practices did not create a good fit.

In 2007, Gipps explained her thinking as:

constructivist models see learning as requiring personal knowledge construction and meaning making and as involving complex and diverse processes; such models therefore require assessment to be diverse, in an attempt to characterise in more depth the structure and quality of students' learning and understanding (p.74).

She notes that, in any socio-cultural framework for assessment, it is important to acknowledge the complexity of interactions among students, teachers and assessment.

Gipps also describes the need to assess the process as well as the product of learning and makes links between assessment and Vygotsky's Zone of Proximal Development (ZPD) (Vygotsky, 1978). The result is the contention that assessment should be an interactive and dynamic process where the teacher and the student collaborate to help the student produce his or her best performance. In such an interactive process, students become involved in the assessment process and are encouraged to monitor and reflect on their own performance so that they become more self-regulated learners. This serves to reduce the hierarchical relationship between teachers and students as students become more active in monitoring their own learning.

Kreisberg, (1992) cited in Gipps, talks about the opportunity to create teacher-student relationships based on power with the student as opposed to power over the student. This can be seen to be in direct conflict with the requirement to produce assessment results from the traditional forms of assessment which presuppose a hierarchical relationship.

What Practices are involved in Formative Assessment?

The debate about the definition and benefits of formative assessment moved to a related discussion about what practices are actually considered to be formative and how these practices should be carried out. This debate makes explicit some of the characteristics of 'good teaching' that Neyland (2007) feels it is unnecessary to explain. In the researcher's opinion this is a healthy and necessary debate because it is not possible to decide how to improve the learning of students based on implicit assumptions about what makes a 'good teacher.'

Black and Wiliam (1998) were attributed with having the most influence over which classroom practices were classified as formative practices. They also established that certain practices were very powerful in improving student achievement. Their work is widely considered to be the catalyst for the changes that have occurred to classroom assessment practices since this time. Their most influential study was the synthesis of over two hundred and fifty studies linking assessment and learning. They start from what they consider to be

the self-evident proposition that teachers need to know about their students' progress and difficulties with learning so that they can adapt their work to meet their needs.

Their research indicates that improving learning through assessment depends on five deceptively simple key factors:

- the provision of effective feedback to students
- the active involvement of students in their own learning
- the adjustment of teaching to take account of the results of assessment
- recognition of the profound influence assessment has on the motivation and self-esteem of students; and
- the need for students to be able to understand how to improve (p.4).

Atkin, Black and Coffey, (2001) sum up the practice of formative assessment in the following way:

Assessment for learning can take many different forms in the classroom. It consists of anything teachers do to help students answer three questions: Where am I going? Where am I now? How can I close the gap? Effective feedback allows them to set goals. When students use feedback from the teacher to learn how to self assess and set goals, they increase ownership of their success. (p.17)

A number of studies have expanded on the aspects of formative assessment that work well together to create the best chance of improvement for students. For example, Boud (1995) cited in Carless (2007) explains that:

The ability of students to improve is substantially impacted by their cognizance with standards and criteria, and this is amply demonstrated in the literature. (Sadler, 1989, 2002; Rust et al, 2003) This is particularly the case when integrated with peer feedback (Lui & Carless, 2006) or self assessment (p.180).

However, as previously mentioned, this raises questions about issues such as what the characteristics of effective feedback are, what activities are most successful in involving students in their own learning and how can teachers best help students to understand how to improve.

There is a wealth of literature that suggests teachers actually need to build a new classroom culture to embed Black and Wiliam's key factors successfully and follow the practices that answer Atkin, Black and Coffey's three questions.

The debate about what effective assessment for learning looks like is currently highly relevant to teachers in New Zealand primary schools. Such an approach requires a dramatic shift in thinking not just for the teachers but also for students. First, teachers have

to be prepared to share power with the students. Second, they have to work out how to do this. Students also need to be prepared to change their behaviours. They need to develop different skills and attitudes and interact differently to what has been expected in the past. This is also a significant challenge.

According to Taylor, Fraser and Fisher (1997):

Open discourse gives rise to opportunities for students to: negotiate with the teacher about the nature of their learning activities; participate in the determination of assessment criteria and undertake peer and self assessment; engage in collaborative and open-ended inquiry with fellow students; and participate in reconstructing the social norms of the classroom. (p. 112)

As is the case with many of those who theorise ideal models, Taylor and his colleagues do not explain how such a communicative climate might be set up. Herein lies the problem for most teachers. How do they implement formative strategies into their classrooms?

The challenge for teachers

Teachers face many challenges. The involvement of students in assessing their own work and that of others requires a high degree of skill on the part of the teacher to break down existing classroom structures and introduce new ways of behaving and interacting. It definitely calls into play the need for a very different classroom culture.

As Nuthall (2008) explains:

Within elementary schools and middle-school classrooms, teachers and students engage in a set of cultural routines during the school day. Each of these routines has an accepted form.' (p.31)

By embracing the socio-constructivist ideology that lies behind formative assessment teachers not only need to change the relationships they have with students but also those that exist between the students themselves. Nuthall notes:

Group processes can either create a climate of support, encouragement and valuing of a student's own beliefs and knowledge or be destructive of a student's self concept and motivation to participate. (p. 241)

Also, he observes that 'acquiring knowledge is as much a social process, structured by culturally determined roles and norms as it is a cognitive process, structured by the curriculum content' (p.247).

Nuthall extends socio-constructivist ideology to such a point that he ascertains that the structure of the classroom constructs the minds and abilities of the students. This calls into

play a whole new level of discourse for teachers to consider. If they are going to implement formative assessment practices that involve students in group processes including such powerful processes as peer assessment and evaluation, they need to ensure a climate of mutual trust and support.

As Gardener (2006) quotes Black and Wiliam as saying, changes in practice are made up of four components that involve:

changes in relationship between the teacher's role and the nature of the subject discipline, changes to the teacher's beliefs about their role in the regulation of the learning process, the teacher-student interactions with a specific focus on the role of feedback and the role of the student. (p.271)

Teachers may have a strong desire to use the tools of formative assessment effectively but, as this involves changing up to four components of relationships and understandings at the same time, this is immensely difficult.

Much could discourage them from their efforts. For example, they may have to contend with resistance and misunderstandings from the students about their attempts to change the expected classroom rituals. As Doyle (cited in Gipps, 2007)) notes:

even when the student has a 'learning' as opposed to 'performance' orientation, the student's belief about what counts as academic work will have a profound impact. (p.79)

No matter how much learning teachers do about changing their classroom culture with the intention of having an emphasis on assessment for learning, ultimately each teacher must decide how to interpret the strategies he or she learns about in a personalised way. For many reasons teachers may do this with varying degrees of success.

One example at the micro level that indicates the complexity of this task is the essential skill of teachers to use questions. This interaction with students follows an established classroom ritual. In a traditional classroom, the teacher asks most of the questions and is generally seeking a particular response. Students know how to follow this ritual. They also know that their use of questions is primarily about having things they do not understand clarified.

Teachers need to completely review their understandings of questioning if they are to change their classroom culture in ways that support involving students in assessment. In her study about the role of questioning in classroom assessment, Cowie (1998) found that students' comments suggested that 'for them, assessment and learning are intimately connected and inherently linked with who they are and how they feel.' She concludes that:

it appears that students' goals and their perception of their teacher's assessment purposes, their relationships with their peers and the teacher, and their perception of the teacher's and their peers' likely reactions influence both their willingness to initiate and how they participate in assessment interactions with others. (p. 49)

This strongly reinforces the need for a climate of mutual trust and support but also demonstrates all the components teachers need to consider when changing their more traditional classroom teaching strategies.

It also reinforces, yet again, that the implementation and improvement of formative assessment practices cannot be easily accomplished. Quite simply, a teacher can get it wrong on any aspect of the skills involved and, in fact, act to inhibit the effectiveness of their intentions.

Teachers Can Successfully Develop Formative Assessment Strategies

On a more optimistic note, Black, Harrison, Lee, Marshall and William (2003) worked with teachers as they implemented formative assessment practices by concentrating on questioning, providing feedback, sharing criteria and encouraging self assessment. They found that as teachers moved forward with their ideas, they began to develop and reshape strategies and were able to transform the implementation of formative assessment. Each teacher had to make decisions about how he or she could implement formative practices within the constraints of their own and their school's assessment procedures.

Black et al. surmised that:

if the substantial rewards promised by the research evidence are to be secured, each teacher must find ways of incorporating the lessons and ideas of key formative practices into his or her own patterns of classroom work and into the cultural norms and expectations of a particular school community. (p.56)

They also found that the new practices teachers came up as a result of the project were:

far richer and more extensive than those they were able to suggest at the onset of the project on the basis of the research literature. This vividly demonstrates that, with support, teachers can transform research results into new and effective practices. (p.57)

However, tempering this, Black and Wiliam, (1998) also warned that:

Teachers will not take up attractive ideas, albeit based on extensive research, if these are presented as general principles which leave entirely to them the task of translating them into everyday practice. Their classroom lives are too busy and too fragile for this to be possible for all but an outstanding few. What they need is a variety of living examples of implementation by teachers with whom they can identify and from whom they can both derive conviction and confidence that they can do better and see concrete examples of what doing better means in practice. (pp 15-16)

Providing 'living examples' is the intent of this dissertation. The researcher proceeds to investigate how the teachers in this study have developed, interpreted and applied the often conflicting purposes of formative and summative assessment practices with the intention of providing a learning culture that supports and improves student achievement and encourages students to develop positive identities as learners.

New Zealand studies that informed the research

Three of the New Zealand studies mentioned in the Introduction chapter were concerned with how teachers view, manage and reconstruct assessment. They provide an important backdrop to this study. They offer information about the positioning of assessment in New Zealand schools from 1998 to 2000. They also confirm the findings of the international literature that it is a very complex and difficult task for teachers to put formative assessment theory into practice without support, even if they are convinced of its merits. This section provides more detail about the findings of these studies to serve as a point of comparison for the findings of this study.

Hill J (1998) found that, in her 1998 study, teachers who had in the past assessed in an ad hoc way began to investigate and understand assessment theory as a part of professional development contracts. However, summative rather than formative assessment practices still dominated their practice. She concluded that much professional development was required to help teachers translate contemporary assessment theory and policy into their classrooms.

In her thesis, Dixon (1999) considered that some of the practices and structures that either inhibit or enhance teaching and learning needed to be identified if the teaching profession was to challenge and modify existing assessment practices so that formative rather than summative activity became a primary focus for teachers. Similarly to Hill, she found the teachers in her study, while accepting the basic argument that assessment has a positive role to play in the promotion of student learning, were not able to explain how they used assessment in such a manner. She also found that they focused on the use of information for summative purposes. The teachers in her study did not have well developed

understandings of formative assessment and, like Hill (1998) she also called for professional development so that assessment practices could be used to their full potential.

Hill, M (2000) prompted by her unease about teachers' stress and confusion about their assessment role, studied teachers' concerns about assessment in self managing primary schools. She reviewed the international assessment literature to show that evidence exists to support the view that, rather than increasing accountability mechanisms to raise standards, formative assessment strategies are more significant in promoting learning and raising standards. Hill was highly critical of the role of the Education Review Office (ERO) for driving the view that fostering students' achievement can be carried out by a set of managerial practices such as monitoring students' progress and achievement at a school-wide level. She found no reference in ERO reports on the schools she was working with to the need to work on developing formative assessment practices to improve student learning.

3. Methods

Overview

This section sets out and justifies the methodology used for the research, the case study approach that was selected and why it was chosen. The selection process that was followed to engage the participant teachers and the schools is outlined. Each school and classroom context and each teacher's background are described to give the reader the knowledge that is necessary to understand the contextual nature of the data collected. The methods section describes the type of interview and questionnaire that were used, followed by the procedure that was followed to implement the research. The ethical considerations of the research are explained and finally the method of data analysis is outlined.

Methodology

As explained in the introduction, it is the intention of this study to provide living examples of the practice of particular teachers in particular contexts.

This study has followed an interpretative paradigm in that it aims to provide an authentic account of the practical realities of the work of chosen participants. Such a qualitative approach was considered to be most suitable because of the complexity of the research questions, the social context of study, the level of human participation involved and the need to capture each participant's world view. However this means replication of the study would be difficult.

Case study approach

A case study approach was selected as the method of data collection. This was because of the capacity of case studies to capture the unique nature of each participant and to recognise that they work in complex context based situations.

Four individual teachers in four different professional contexts with four particular classes of students were chosen for the case studies. Six or seven students from each class were also interviewed. As such, the studies are a snapshot in time of the ever changing assessment landscape in New Zealand schools.

The chosen approach involved no hypothesis to test statistically. The data were sorted for themes and commonalities and differences within these themes. Which themes were to become important and which would be less important were not considered until the data was collected and reviewed for meaning. At this point, the key factors that emerged were identified and classified against the information collected from the research literature.

The strengths of a case study approach are explained by Hitchcock and Hughes (1995) who consider that the case study:

Provides a unique example of real people, in real situations and allows for a rich and vivid description of events relevant to the case and the intention to seek and understand the perception of the participants of the study. Case studies are strong on reality and can provide insights into other, similar situations and cases. (p.317)

In this case the research is talking about the insights that teachers in other schools might gain. Most importantly, case studies capture unique features that may otherwise be missed by using approaches such as surveys.

The strengths of the professional cultures of the four schools and the fact that these four teachers were experienced, dynamic, reflective practitioners who think deeply about their teaching have provided 'best case scenarios' for other teachers to consider. The researcher's intention with the methodology chosen, neatly fits with the recommendation of Black and Wiliam (1998) that what might best help teachers move forward in their understandings of assessment practice is a variety of living examples of the practices of teachers with whom they can identify. From these examples they can both derive conviction and confidence that they can do better and see concrete examples of what doing better means in practice.

Assessment practices, which appear on the surface to be a way of informing and judging learning were examined at a deeper level. Assessment is actually about relationships that exist, the disbursement of power between teacher and students, and among students, and

the interactions that occur between teachers and students. In this study, teachers and students were asked to reflect on assessment as it happened in their classrooms, what it meant, what they knew of it and what they believed about it.

Selection of Participant Schools

The four schools were selected because they were schools that were currently working hard to establish purposeful and manageable school-wide assessment practices. The schools had the commonalities of having reflective and collaborative professional cultures where teachers participated in decision-making, where they were encouraged to be leaders and where they had been through extensive whole school professional development.

The schools provided sufficient diversity for the findings of this study to be of interest to a wide variety of other teachers in other of schools. The decile rating of the schools ranged from decile four to decile eight. Two were full primary schools and two were contributing schools. While the students in each school were predominantly European, there was some ethnic diversity. Three were state public schools while one was a special character school. The rolls of the school varied from three hundred students to six hundred students.

Each school had developed a shared vision in consultation with the teachers and parent community. The researcher had noticed a feeling of positive energy in the case study schools. Teachers appeared to be enthusiastic and relationships between the senior managers and teachers were collaborative and focused on developing the learning culture of the school.

Description of Participant Schools

School A was a large urban full primary school (Years 1 to 8) with over four hundred students. It had a decile 5 rating, with an ethnic composition of 75% European/Pakeha and 16% Maori students.

School B was a special character, Catholic; full primary school (Year 1 to 8) with close to three hundred students. It had a decile rating of 6, with an ethnic composition of 85% European/Pakeha, 9% Maori and 7% of other ethnicities.

School C was a large contributing primary school (Years 1 to 6) with over six hundred students. It had a decile rating of 8, with an ethnic composition of European/Pakeha 90%, 4% Maori and 6% other ethnicities.

School D was a large urban full primary school (Years 1 to 8) with over three hundred students. It had a decile rating of 4, with an ethnic composition of 68% European/Pakeha, 14% Maori, 10% Pacific and 8% other ethnicities.

Selection of Participant Teachers

The researcher had particular teachers in mind with whom she hoped to work. She felt that each of these teachers would provide good examples of best assessment practice for other teachers. She had been in their classrooms observing during their school's ERO reviews and had noticed that the case study teachers appeared to have developed cultures of high trust. Students in their classes seemed to be both highly engaged in their learning and working well and cooperatively. The teachers were striving to integrate the principles of formative assessment and to involve the students in their own assessment. This appeared to be working very successfully; more successfully than in nearly all of the primary classrooms the researcher had visited over a four year period in her role as an ERO reviewer. Having chatted with each of the teachers during the ERO review, the researcher found them to be articulate and reflective about their practice, easy to engage in conversation about teaching and learning, and passionate about their teaching.

Participant Teachers' Positions and their Class Contexts

The teachers were all asked to choose a pseudonym for use instead of their real name. Eventually however, the researcher chose names for them and asked them if they were happy with her choices.

Jane at School A

Jane started teaching in 1975 in the middle school. She had been teaching for thirty-one years and had taught down to J3 but mostly she had taught in intermediate schools. Jane became a senior teacher in 1994 in School A and was the team leader of the Year 7 and 8 syndicate at the time of the study. She was one of two teachers with a combination of two Year 7 and 8 classes in a two classroom open plan arrangement. The class was called the 'self-negotiated learning' class. Students were allowed to opt into this class after discussions between parents, students, teachers and the principal if it was felt that they would cope well and benefit from this approach. The students in this class were expected to negotiate their timetable with their teacher and to work with high levels of independence and peer support.

Debbie at School B

Debbie started teaching in 1976. She taught juniors but left for seventeen years to have children. She came back to teaching Year 7 and 8 students at School B and was appointed to her present school five years ago. Debbie was the Deputy Principal with a Year 7 and 8 composite class. She was also the teacher who led assessment in the school. The researcher interviewed her twice. There were two classes in the senior team and this class was a parallel one to the other.

Suzanne at School C

Suzanne started teaching twenty-four years ago, starting as a young teacher with new entrants and then taking on Year 5 and 6 students. She was the associate principal with many responsibilities outside the classroom. She was also the team leader of the Year 3 and 4 team. She had a Year 4 class which she taught four days out of five.

Gina at School D

Gina had made a success of a business management position before becoming a teacher. Within six years she had become a member of the management team and had responsibility for a syndicate of five other teachers. She was teaching a Year 7 and 8 'like-minded learners' class. The classroom programme was based on some self planned time, some compulsory time and some optional workshops. Students were selected as being suitable for the class on a number of criteria based on their work habits, independence and suitability to cope in a different learning environment.

Selection of Participant Students

The teachers were asked to select seven children from the roll and to invite these students to participate. The intention of the researcher was to gain close to a random sample. However she left it to the teacher to choose the students, asking for every fifth or sixth student on the roll dependent on the number of students in the class.

These students took permission slips home and discussed their participation with their parents. The parents returned the permission slips to the teacher who handed them on to the researcher on the day of the student interview.

As a result of the small numbers in the focus groups, the teachers were not asked to choose a variety of ethnicities to be represented. There were up to ten different ethnic groups in each school. However, a focus group of seven students was not big enough to successfully achieve appropriate balance of ethnic groups. Nor did the researcher concern herself with gender issues other than to ask for roughly equal numbers of boys and girls in the focus groups.

Two problems with the design of the study occurred during the implementation process. Firstly, on the day of the interview two schools had some students absent. This meant that six students were interviewed at School A, seven at each of Schools B and C and five at School D. Another issue arose when the researcher arrived to interview students at School A. The teacher explained that, when she had invited students to participate, a number of boys had said no. When questioned why, they told her that they did not think their learning or attitude to learning was good enough to participate. This was unfortunate because of the

possible bias in the sample of students included. It would have been very interesting to have interviewed some of these boys and to have listened to their thinking.

The outcome was that the researcher could not be sure she had talked to a good cross section of students and may not have collected representative data.

Participant Assessment Leaders' Positions

The assessment leaders were given pseudonyms by the researcher. At School A, the person considered to be the most appropriate person to talk with about school-wide assessment was the principal. Gary had been in the school for six years. The deputy principal who had had major responsibility for developments in assessment had recently left.

At School B, Debbie was the teacher interviewed but she was also the assessment leader in the school. As the deputy principal of a small school, she had been involved in the establishment of many of the new practices in the school.

The assessment leader at School C was the deputy principal, Anna, who had been at the school for eighteen years. She began as a Scale A teacher, and then became a syndicate leader and then a senior manager. She was released from the classroom except for working with groups in mathematics and she was the school Special Needs Coordinator (SENCO) with various other responsibilities within the leadership team.

Kate, the assessment leader at School D, was the deputy principal of the school who had been in the school for eight years. She was released from classroom practice to develop systems and curriculum and assessment practices, initiate and manage change, support teachers and provide pastoral care.

Methods of Investigation

Two tools were used.

- Semi-structured interviews
- A questionnaire using likert-style questions

Semi-structured interviews

The use of semi-structured interviews allowed for the individual voice of each participant to be heard. The degree of flexibility that a semi-structured approach allowed meant that during the interviews, the researcher could follow leads as they arose, probe further into areas of interest that emerged and allow the interviewees more scope for speaking further about areas that they considered important in their own voice. The assessment leaders and teachers were invited to use a paper copy of the questions during the interviews as a prompt. This supported the researcher's intention to allow the teachers and assessment leaders to take a high degree of control over the discussion as opposed to a more formal 'asking of questions and giving of answers' approach.

Questionnaire

A likert item questionnaire was chosen as it allows respondents to specify their level of agreement to a statement. A likert item is a statement which the respondent is asked to evaluate according to subjective or objective criteria. Generally, the level of agreement or disagreement is measured. Usually five ordered response levels are used. The range usually goes from strongly disagree to strongly agree.

In this case, an eighteen item questionnaire was administered to all the students in the focus groups. (See Appendix D). This was administered at the end of the student interview questions and served two purposes.

- a. To collect information about the students' understandings and the understandings of their class members to assessment;
- b. To serve as another way of promoting discussion in case some groups of students were unable or not motivated to answer open ended questions.

In fact, the students were mostly very forthcoming in the discussion. The group from School A were less enthusiastic and rather reticent while the group from School C were less able to articulate their understandings because they were younger children from Year 4. In both instances, the questionnaire was very useful in promoting further discussion to clarify the researcher's understandings of the students' beliefs.

The questionnaire required the students to rate themselves and their class as a whole on a five point scale in relation to questions about:

- their rating of themselves as a good learner
- their knowledge of the learning process
- how well they think they understood their achievement and next steps in various subject areas
- how closely they thought the work they were doing was at the right level for them in various subject areas
- their ratings of themselves and their classmates about their ability to work in groups and to support each other's learning
- their rating of the ability of the class to work independently
- the amount of time they spent off task each day
- their opinion of their success in managing their own learning
- their view of how much they are improving
- the interest in their learning

Procedure

Setting up the study

The initial approach to schools was made in the form of an email to the school principals. The email explained the study and that the researcher would ring them a week later when they had had time to consider the request to work in their schools. (See appendix E) A week later each principal was rung to ask for permission and to discuss the project. The principals all agreed to the study taking place in their schools and gave the researcher the contact details for each teacher and assessment leader, and permission to ask them for their participation.

The teachers were sent an email outlining the study and were given a week to consider whether they wished to take part. (See appendix F) A week later, the researcher rang them and they all agreed to take part. The telephone conversation gave them the opportunity to clarify anything about the study and to organise the interview times.

A set of questions was prepared for the assessment leaders, the teachers and the students to serve as a guide for the interviews. (See Appendices A, B and C) The teachers and assessment leaders were sent the questions several weeks prior to the scheduled interview. The purpose of this was to keep the process transparent and to allow them time to study the questions and give some initial thought to the areas that would be covered.

At the teacher interviews, the researcher discussed the reason for talking to the assessment leaders with the teachers and the part the students would have in the study. Teachers were given information letters for parents and students. These included a permission slip to be returned to the school by a specific date. (See Appendices G and H)

The researcher rang the teachers shortly after this date. She made sure the parents and students had returned the permission slips, and set up a suitable time to interview the students.

On the day of the student interviews, the researcher meet with the assessment leaders in each school, discussed the study and presented them with an information sheet. (See Appendix I) They read these. Each assessment leader signed a permission slip at this time.

A meeting time was set up for a future interview.

The Interviews

Semi-structured interviews were conducted with the school assessment leaders, the classroom teachers and the students. The teacher interviews took place in June and July 2008. The student interviews and the associated questionnaire were carried out in August 2008. School assessment leaders were interviewed in September 2008.

Teachers

The individual teachers and the researcher met. Their discussions lasted approximately one hour and were based on questions in five areas of interest. These were:

- the teacher's assessment practices in the classroom
- the teacher's knowledge about assessment
- assessment practices in the school
- changes to the teacher's assessment practices over time
- assessment for a dynamic classroom

Each teacher was emailed a copy of the transcript of the interview approximately one month after the interview. They were asked to read the transcript and verify it was a correct record of the discussion. They were invited to correct anything they felt was not accurate or to mention anything that they wanted to clarify.

(See Appendix B for the guiding questions for the teachers)

Students

The groups of students and the researcher met for interviews that lasted approximately forty-five minutes. At the end of this interview the students were given individual copies of the

questionnaire. The questionnaire was based on questions in two areas of interest. These were:

- student knowledge of teaching and learning
- the learning environment of the class

The approach used with the questionnaire was to read it through together so that everyone was sure of the categories for the responses. This led to some further discussion about the questions and these discussions were recorded as part of the transcript.

The student groups were emailed a copy of the transcript to their classroom email address asking them to read, correct and clarify anything they wished to mention.

(See Appendix C for the guiding questions for the students and Appendix J for the questionnaire).

Assessment leaders

The researcher asked to talk to the person who would be most knowledgeable about assessment overall in the school. The assessment leaders, or those people who were considered the best individuals to talk to, ended up to be the principal of School A, the deputy principal of School B, who was also the teacher who was interviewed, and the deputy principals of School C and D. While two of the schools had assessment teams which were researching and driving the development of assessment in the school, these teams did not necessarily have a good overall picture of the school's development of assessment over time.

The individual assessment leaders met with the researcher and had an approximately one hour interview based on four areas of interest. This interview covered:

- changes to the school approach to assessment practices and understandings
- the professional context in which the teacher works
- changes to classroom practices
- future school directions

Assessment leaders were emailed copies of the transcript asking them to read, correct and clarify anything they wished.

(See appendix A for the guiding questions for the assessment leaders)

Ethical Considerations

Ethical approval for this project was gained from the University of Canterbury Human Ethics Committee. The five principles of the expected ethical behaviour of a social science researcher (Davidson & Tilch cited in Mutch 2005) i.e. respect for confidentiality and

anonymity, the intention to do no harm, not use deceit and to ensure voluntary participation and informed consent were considered in the following ways:

To do no harm and not use deceit

An ethical tension was the fact that each of the schools was known to the researcher in her professional capacity as an education reviewer. She had worked in each of the schools during 2006, 2007 or 2008 on education review office teams. The knowledge she had of the school cultures and the practice of the teachers she wished to invite to participate emerged from her professional role. It was important to make a clear distinction between her role as an ERO reviewer and her role as a researcher.

To achieve this, when she approached the school principals to ask permission to invite particular teachers to participate she made the distinction between her role as an education reviewer and as a researcher very clear. She talked about how she would be explaining this distinction at every step of the way to those involved. All correspondence including letters to teachers, assessment leaders and students inviting them to participate made this distinction. All permission slips, including those to parents, made her role as an independent researcher clear. Templates of these letters are included in the appendices. (Appendices E to I)

After the interviews the teachers and assessment leaders involved were emailed a copy of the transcript. They were asked for clarification and feedback. All were happy that the transcript was an accurate record of the discussion except for one who wanted to clarify something she had said. Students were sent an emailed copy of their transcript through their teachers. No feedback was received from the students.

Voluntary participation and informed consent

It was very important that participants could feel assured of the independence of the study. When the researcher met with each group of participants she spoke with them about her Masters degree, why she was interested the research topic and explained again that they could withdraw at any time with no fear of reprisal. Each of the school principals she approached, each assessment leader and each teacher agreed to participate except for one teacher. This teacher was very involved in a school performance at this time and felt overloaded. The principal then offered to approach another teacher he felt was a suitable substitution. This teacher was happy to participate instead. Information sheets and permission slips were used to inform participants of the nature and conditions of the study. They were given a week to consider their potential involvement and telephoned for their decision a week after they received the letter. The information sheets and consent forms also made it clear that anyone could withdraw at any time without fear of reprisal. (See Appendices E to I)

Anonymity and Confidentiality

The researcher explained the issues of confidentiality with each group or individual when she met with them. She explained that she would not be sharing the names of the other schools or the participant teachers with each of them or further afield. For the sake of anonymity, the schools have been called Schools A to D throughout this document. The assessment leaders and teachers have assumed names. The students chose names for themselves at the start of the interview and also used these assumed names on their questionnaires. The researcher did not ever learn the real names of the students involved.

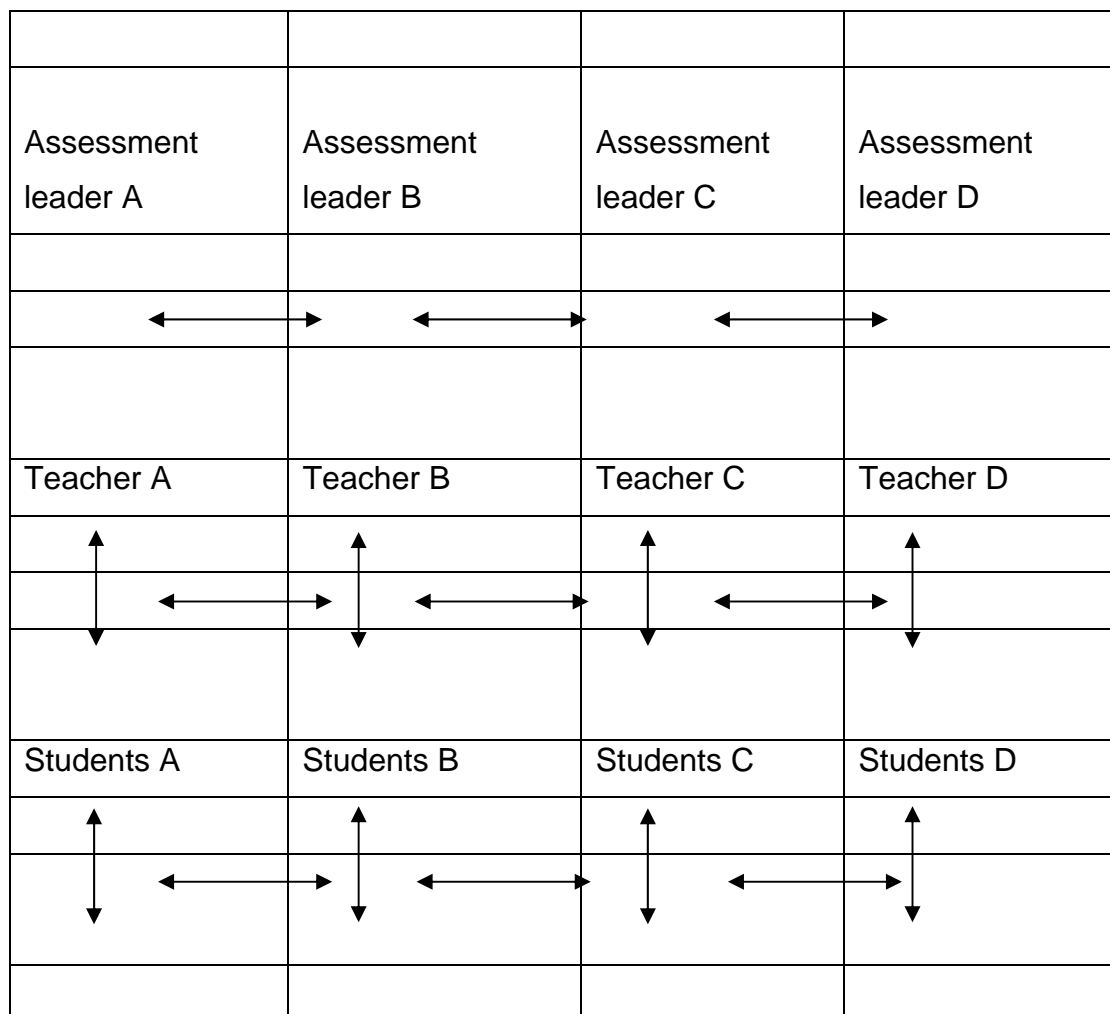
Method of data analysis

The main aim of this study was to explore the ways four different teachers view, understand and manage assessment. As a result of the quantity of data collected and the confines of this dissertation it was necessary to be selective about the analysis of the data.

Figure 1 shows the way in which vertical and horizontal links were used to analyse the data. The directional arrows show the links that the researcher chose to pursue for the purposes of this dissertation.

Figure 1

Horizontal and Vertical Analysis of Interviews



Assessment leader analysis

The information from these four interviews was compared across the schools to give rich background information about the context each teacher works within. This was because it was not possible to consider the way the teachers have developed their practices over time without considering the influence of the schools’ professional context on each teacher. However, it is also possible to look at the journeys of each school and compare the schools’ assessment journeys with one another.

Teacher to teacher analysis

The four teacher interviews were compared under relevant headings.

Student to student analysis

The similarities and differences between what the students said were compared across the schools.

Questionnaire data

The data produced from the questionnaire provided very little variation from school to school. However, individual bar graphs for the data collected from each school that support the discussion are included in the Appendices (See Appendix J). The data for all schools were also combined and this data are presented in the main body of the report. The data were interesting in that it gave uniformly high ratings across all the questions from all students across the four schools. A short discussion of the questionnaire findings is included in the student to student analysis.

Teacher to student analysis

The links between what each teacher said and intended about their assessment practices were compared with what the students believed and understood about assessment in each classroom context.

Process of data reduction

Each interview was transcribed and searched for the most representative information and summarised under the headings of the research questions. In School A, the assessment leader interview was searched and summarised under themes. The teacher interview was then searched and summarised in the same way. The student interview was summarised under the chosen headings but, as well as this, the student questionnaire responses were graphed as bar graphs and pie graphs.

The same process was followed for the assessment leader, the teacher and the students at Schools B, C and School D.

Vertical Analysis

The teacher to student links were analysed vertically to ascertain the relationship between what the teacher said and believed and between what the students in their classes said and believed.

Horizontal Analysis

Horizontal analysis was prioritised over vertical analysis because of the researcher's interest in the similarities and differences between the schools, teachers and students. The information from all the assessment leaders was analysed for commonalities between the schools using the headings the categories of the interview questions. (See Appendix A) That is, all the assessment leader interview responses were considered across the schools.

Similarly, the information from all the teachers was analysed for commonalities and differences between the teachers, across the schools and under the interview headings (See appendix B)

The information from all the students was analysed for commonalities and differences between the students, across the schools, under the interest headings. (See appendix C)

The student questionnaires were considered for similarities and differences. The student questionnaires were also collated across the schools and presented overall as two bar graphs. The results for each question are also represented as pie graphs.

Each section is followed by a short discussion of the findings.

4. Findings

The School Contexts

Overview

This section is the horizontal analysis (See Figure 1) of the assessment history and the current assessment context in each school. The section is relevant to help ascertain how the ways in which the schools operate have shaped the learning journeys of the case study teachers. Assessment leaders were given the following pseudonyms: Gary in School A, Debbie in School B, Anna in School C and Kate in School D.

The section follows the development of each school culture since Tomorrow's Schools and provides a description of the professional context in which each teacher works. Information is structured under relevant headings. The section ends with a discussion of the findings for the particular part of the report.

Schools' Past Assessment Practices

All assessment leaders talked about what assessment practices were like in their schools five to eight years ago. The similarities in past practices among the four schools were:

- all the schools had employed a traditional approach with teachers assessing to the curriculum achievement objectives.
- most assessment was in the form of tests, particularly in mathematics where pre and post-testing was favoured.
- all teachers planned and assessed in their own way and in their own classes.
- children were not involved in assessment except for a little bit of self assessment and they did not know the learning outcomes prior to embarking on learning.
- standardised tests such as Progressive Achievement Tests (PATs) were administered but results were just recorded and not analysed or used to help improve student learning and achievement.
- little or no thought had been given to the development of school-wide assessment practices or the use of assessment information to inform decision making.

The Catalysts for Change

The changes in all schools were attributed to professional development opportunities and the arrival of key people on the staff. Change began during the post Tomorrow's Schools era and has continued unabated to the present day. The assessment leaders appeared to consider constant change and the quest for school self-improvement to be an accepted feature of present day schools.

In School A, the staff had been involved in an ICT contract that involved teachers in examining pedagogy. This meant that when the new principal arrived five years ago the school was poised for change. As Gary, the principal, put it, 'It wasn't a battle to shift the staff because they were ready to move.'

Debbie also attributed the very clear idea they developed about where they wanted the school to head to as part of an ICT contract. The contract gave them a 'clarity of vision.' At School C, the period of change was initiated by a new principal who began to ask 'a lot of very good questions about the assessment practices at the school' and by the shock of a poor ERO report. Consequently, the school embarked on a period of professional development and sought advisory help. A new management team initiated the beginning of change at School D. Members of this team arrived to find a huge variation in the quality of teaching practice in the school. The main vehicle for affecting change was the Assess to Learn (AtoL) contract.

Change has occurred in all four of these schools very quickly and the cultures have developed dramatically. Within six years, the schools have gone from traditional cultures where teachers taught as individual units to complex professional learning communities where teachers are consulted over decision making and the teachers have developed shared understandings of both school-wide and classroom-based assessment practices. The emphasis is on teachers' learning so that they can improve student learning. All the assessment leaders talked about the reason for changes being the intention to 'put students at the centre' or to become 'student focused.'

Aside from the influence of professional development contracts, the schools have also used advisors in a support role to meet their needs outside these contracts. Both School A and School D have called on advisors to help facilitate or inform changes 'customised to needs'. For example, School D decided to apply some of the practices it had learned during the AtoL contract and overlaid these assessment practices with PD in physical education. This provided a further opportunity for teachers to apply their new knowledge in a practical context and helped them embed their understandings within another curriculum areas.

The Types of Changes that Have Occurred

Changes in all the schools have evolved. They have been introduced over a long period of time and have been based on research and pedagogy. They have been implemented layer upon layer. Changes to assessment has been one of these layers.

Schools A and C have put a lot of work into developing personalised learning models which underpin all other change. School A developed its inquiry learning model as an outcome of their ICT contract while School C used advisors to support the staff to develop a school-wide approach called Our World of Learning.

Debbie felt that School B now had a very clear idea of where they wanted the school to head and how they could move there. They wanted the school to run from Year 0 to 8 with clear progressions. This vision underpinned the work that was undertaken and has meant that a lot of work in curriculum and staff and syndicate relations has occurred.

Schools A and D have begun to make structural changes to classroom organisation so that classes are run on less traditional lines. For example, at new entrant level in School A, team teaching has been introduced. The day has been restructured and the use of the teaching team adjusted to better suit the learning needs of the children. At Year 7 and 8 level, self-directed learning classes have been established in both schools. The rationale for this is recognition of the fact that students are ready for this type of learning and able to manage themselves well. Both classes grew out of examining what kind of an environment would best support new learning approaches, what would give students the ability to make decisions about their learning and what would offer greater choice.

However, the biggest change has been in the knowledge the teachers now have about formative assessment and the way they use this in classes to support students' understanding of what they are learning and why.

Involvement of Teachers in Critical Debate

Teachers have been involved to a high degree in the process of change. Much discussion and debate has occurred at team and whole staff meeting level in all the schools. As a result, at School C, teachers have dropped a lot of testing and have begun trialling some of the new assessment tools to decide which are most useful. The assessment group at School D were exploring the use of the AsTTle test as part of their brief.

At School D, Kate explained that the school had rationalised its assessment practices as a result of ongoing critical debate about the purpose of each assessment. Kate said:

We had talked a lot about PAT tests, that we never used the results effectively and the only reason we have done them is that high schools want that information. We thought that's not benefitting us. It is giving us a grade or stanine but how is it benefitting the learner?

In the past, teachers would not question their practice. The sharing of ideas and professional discussions have increased their critical response to their practice.

The level of involvement of all staff in changes to assessment meant that the teachers have developed common understandings. In School D, Kate believed that the junior and senior school had been united by the discussions that had occurred.

Improved Communication between Teachers

The dialogue between the teachers on the staff of each school has changed. The schools have developed systems and structures that lead to much greater communication and professional discussion among the teachers than five to eight years ago.

This has led to greater opportunities for teachers to discuss assessment and learning.

A comment from Anna illustrates this change.

For teachers to adopt best practice they have to be sharing what they are doing with others so it makes them think it through. Conversations with people are now not just about what you did at the weekend. They are about 'how do I get from here to here? I am trying this. What do you think?' That would be happening more than it used to. Teachers now talk with each other about individual student needs.

Teachers have developed common language and assessment terminology on which to base these discussions.

Kate explained that meetings used to be a lot of administration. The groups that worked on introducing the new curriculum documents were focused but it was a process of going through the school requirements and expectations. They never really got on to the big questions about the whole school. The staff had asked and answered a lot of questions about their beliefs about teaching and learning. She attributes the changes in culture to the collective knowledge and strengths of the staff, the use of resources about good pedagogy on which to base changes and the development of systems to support teachers in implementing and embedding their learning in classroom practice.

The modelling and trialling of new ideas and reporting back to the whole staff are two aspects of the schools' professional cultures that are leading to the implementation of worthwhile changes.

Common developments in school structures and processes

The systems the schools have developed encourage greater communication between and across teams and also serve to help teachers embed new practices. Each school had developed slightly different practices but all had developed clear processes for disseminating information, ensuring all teachers had common understandings, sharing information, involving all teachers in decision making, creating collaborative practices, trialling innovative ideas and reviewing and improving their assessment practices.

Leadership teams had been powerful in driving change in all of the schools. They were doing much of the work of coming to terms with new innovations before presenting the ideas to the staff for critique and further development. Some of the leadership teams were more prescriptive than others in their expectation that teachers should trial and improve assessment practices in certain ways. However all schools, except School B, had teams made up of teachers who had a common interest in reviewing and making improvements to school practices. School A had focus teams for particular areas that reported back to the staff. School C had a number of different curriculum teams that also considered the review and improvement of assessment as part of their brief and School D had an 'authentic assessment team' that was working on assessment developments. School B was smaller than the other schools and had less staff to draw on to share this load. The principal and deputy principal performed this function.

The schools were using the new assessment tools such as AsTTLe and the new PATs in ways that they considered to be most suitable and purposeful for their schools. Senior managers in each school had the role of deciding how these tests would be used. They subsequently carried out the analysis and interpretation of data that was collected and decided what to do with this information. This practice was a greater priority at School B than at the others. School B had been analysing data to inform school-wide planning for a number of years. They used it to track achievement and progress, to identify individuals who needed support and to look for emerging trends and patterns in student achievement. Debbie considered this area of assessment practice to be one of the school's strengths.

The interviews showed a general acceptance across the schools of the worth of collating evidence of this kind, using the new assessment tools or nationally recognised tests of reading such as the Supplementary Test of Achievement in Reading (STAR). None of the assessment leaders took a critical stance about collecting evidence. Their comments indicated that they valued the practice.

The schools had all developed assessment schedules that told teachers what information to collect for school and reporting purposes. Interview comments suggested that collecting

assessment information for school requirements seems to sit comfortably alongside the adoption of formative assessment practices that had been encouraged in classes.

The four schools used school-wide assessment results for both formative and summative purposes. Teachers used the information that was collected about their students to inform their own teaching but also put it on a database for school-wide analysis. The schools also used the data that was collected to evaluate the effectiveness of teaching programmes. For example at School A, each teaching team set a team target based on a gap in learning that had been identified as something it would all like all teachers to focus on in their classroom programmes. They worked on addressing this gap through common planning. They monitored improvement in this area together.

The teachers continued to be involved in PD contracts and in working with advisors. This work was followed up by internal PD to further teachers' new understandings and to help them transfer new strategies into their classroom practice. For example, School A was forming a new cluster with other schools because Gary believed that this led to 'the cross pollination of ideas.' The cluster was trying to get an Extending High Standards Across Schools contract.

The Double edged Sword for teachers - New Forms of Accountability

There were many benefits in the systems the schools had developed to encourage greater communication and help teachers to embed practices. It also needs to be acknowledged that there was a strong element of accountability for teachers to keep up with the play and to perform well. The schools had implemented processes to ensure that the learning from PD was applied in practice. The assessment leaders believed that their school cultures were now open and supportive enough for these processes to happen without teachers feeling threatened. Kate explained that teachers' attitudes had changed. It was acceptable for teachers to say they needed help. Anna thought that the culture among the staff was that teachers wanted to know how to best reach the children that they taught. They would not let a child stagnate and they would not label a child as a problem. They were more open about what they could learn from each other and approached each other more for help.

For example, at School C, staff meetings and team meetings used to be mainly administrative in nature. There was a big focus now in both staff and team meetings on PD. For example the current PD was based on reading. Team meetings were used to follow up big ideas, and share what had been done in classrooms. Anna said:

There has been more uptake and consistency because everyone knows they are going to have to report back and share so it ensures that they follow through.

Similarly, Kate at School D said:

Our bottom line is if what we do in PD is not going to improve teacher practice, which will ultimately improve student learning, then we shouldn't be doing it.

Senior managers or team leaders visited teachers in their classrooms and gave them direct feedback about chosen areas. Teachers were being increasingly encouraged to visit each other's classrooms. This practice was particularly well developed at School D where teachers regularly arranged visits among themselves to view particular aspects they wished to see in practice.

At School D, a process called 'Vertical Sharing' had been implemented. Members of teams who taught at different levels in the school shared practices and learned from each other. Also 'Learning Walks' occurred where the senior managers would stroll through classrooms looking for evidence of the uptake of certain practices. They would report back to the staff about what they had noticed and share good examples.

The appraisal systems in all the schools had been developed to be much more comprehensive and to help ensure that teachers were achieving certain desired outcomes. In Schools B and C, as part of the appraisal process, the senior managers talked to students in the classes about what they knew about their learning. It used to be about what they wanted the teacher to be able to do but now it was what they want the children to be able to do. They talked to the children about their next steps, the process of learning and whether they knew how to achieve their steps and reported their results back to the teacher. This was designed to make the teacher focus on what was happening for students rather than what the teacher was doing. In School A, Gary explained that when he went into a classroom to do an appraisal observation he wanted to look at how the teacher in that class was inquiring into the learning of students. Such an approach was certainly putting the onus on teachers to be able to show how assessment was being used to focus their programmes on the evidence they collected.

Teachers shared and analysed their assessment through practices such as the moderation of students' work samples. At School D, this practice had gone further. The teachers were expected to justify their thinking. For example, they may describe at a syndicate meeting why they had put a child in a certain category and how and what they were going to do to help them move forward.

Challenges and solutions

The schools had encountered a variety of challenges that had created barriers or slowed progress. However, they had developed cultures that engendered a 'can do' attitude and solutions were sought and actioned in a positive way.

At School A, the data management programme had hampered the collation and analysis of school-wide results. However, a new system that was more responsive to what teachers wanted to do had been adopted. There had also been ongoing modification and improvement of the inquiry learning model as there was a concern that some teachers were not facilitating learning with enough depth. Gary felt that the improved assessment of inquiry learning was something that always needed energy both in the involvement of students in the process of assessment and in building on the actual process of assessment so that the assessment became part of the inquiry. In the self-directed learning class, the teachers had had to establish new structures to ensure that students didn't *'just drift'*. Gary believed there had been some very good systems established. Initially, some students who had less motivation and a lesser degree of organisation did 'meander' and required a lot of teacher direction. However, Gary mentions it was interesting to watch students from Year 7 who floundered a bit picking up the personal organisation and self motivation required, and who actually flourished as Year 8 students.

School B encountered a setback when the senior managers first tried to develop marking rubrics with the staff. They realised that many teachers did not have the knowledge to use them successfully. The solution was found in senior managers developing the rubrics and taking them to the staff for adjustment and comment. They were now in a process of reviewing the rubrics with the whole staff because they were experienced in using them and were more ready to have input.

At School C some teachers did not take new practices on board. Anna perceived that this was attributable to some who were resistant to change and some who could not see how it might work. For some teachers and students, it was a whole new way of working. Particularly in numeracy, teachers followed a set programme to become familiar with a totally new way of teaching. Some teachers found this restrictive while some students found it frustrating. The programme was too slow for their needs.

School D encountered a similar issue. Kate explained this as:

Sometimes when you have put theory in front of teachers or a reading you hope they will take it and make wonderful changes to their classrooms but I believe you don't really know until you go in and have a look yourself.

The challenge of teachers being unwilling or unable to put their new learning into practice had been solved in both schools by the development of systems to help teachers learn from each other. At School D, these included reciprocal classroom visits, sharing vertically from level to level and at team meetings, using quality learning circles, appraising teachers to address areas of concern and using their strengths to enhance the learning of other teachers and to offer students these strengths. Kate says:

That is how we have helped bridge the barrier from going from theory to practice for some people who can't do it. We have stipulated for reciprocal visits that they are about something they are learning or they may be about our syndicate targets like the junior school doing literacy. Some teachers are better at moving from theory to practice than others.

An Example of Contradictory Ideology

Both the assessment leaders in Schools C and D were passionate about their school's capacity to meet the varying social and educational needs of their students. They both spoke about the power of formative practices and the empowerment of students and appear to believe in equity for all students. However, both made comments that indicated an assumption in their thinking that a function of schools is to produce and reinforce the social hierarchy.

Anna said:

Some children would prefer to be told, so we have to actually encourage them or influence them to do their own thinking. It's about meta-cognition and thinking about thinking as well. We don't want children to just go with the flow. We want them to think. On the flip side we don't want every child to be so incredibly individual that nobody thinks the same way. We are still going to need the chiefs and we are still going to need the Indians. We still need the cooks and we still need the cleaners.

Kate said:

We have said for years that our students sit in three boxes but we have a real core of students in our school who are very motivated, very capable, very directed and could probably learn in a classroom by themselves. We have a bunch of children who work well in a more traditional classroom, being guided, a lot of facilitation, being scaffolded. They need more support. Then we have another pod of children who work well in a more practical sense.

Discussion of the school contexts

The developments the teachers in this study have made to their assessment practices need to be considered in conjunction with the changes in the professional cultures of the schools in which they work. The influence of the school context in which they work has helped shape them into the teachers they had become.

The information in this section confirmed a period of rapid change in all four schools and this was largely attributable to the professional development that had occurred. The teachers had been part of a transformation process. This had been deeply involved in the decision

making process that had resulted in reforms to virtually every aspect of curriculum and assessment. The emphasis had been on the teachers' learning so that they could improve learning for students.

The schools had all developed clear visions for their schools. They had all consciously changed from traditional environments where teachers taught largely in isolation to schools that wanted to place learners at the centre.

However, there were some inconsistencies evident in the underlying thinking of two of the assessment leaders. The comments mentioned by Anna and Kate, in the conflicting ideology section, indicate an assumption in their thinking that a function of schools is to produce and reinforce the social hierarchy.

The School D situation particularly confirmed this contradiction of thinking. Certain students were being selected for the 'like-minded learners' class because they had better self-directed learning skills. The school was considering extending the arrangement to the year 6 level. The danger is that such a move is the beginning of a stratified, hierarchical learning system fraught with judgements about learners and associated decisions about how they learn best and who was to be selected or not selected. There are implications for the opportunities for the students who are not chosen, the social makeup of the other classes and the concern that they will be taught 'in different ways' because they are labelled as particular types of learners.

There was a tension here for both assessment leaders in their understandings about learning about which they did not seem to be aware. Such statements varied from the intentions of formative assessment and the equitable cultures that are necessary for formative assessment practices to improve the achievement of all students. This point, which is outside the boundaries of this study, would be worthy of further consideration against the research literature.

Despite these underlying concerns, the teaching environments in the schools had become more purposeful because teachers knew where they were heading and they had been included in decision making processes. The PD the teachers had undertaken, although from a number of different sources, had involved all teachers and had led to the questioning of, and critical debate about, traditional teaching practices. It had created a strong trend toward the use of formative assessment practices and had resulted in all the schools creating new systems and procedures that had improved communication between teachers and increased the level of professional discussion that occurred.

This had led teachers from being practitioners who worked largely in isolation and did as they were told to becoming collaborative practitioners who shared and debated ideas, questioned and reflect on practices, implemented changes and expected to be involved in

decision making. These were schools in which there was an expectation that change and improvement would continue to happen, that teachers would have ownership of these changes and that ultimately everything was being done to benefit the learning of students.

Teachers followed school assessment schedules and their comments suggest they were happy to do so. The schools used a combination of new national assessment tools and teachers entered their results on a school data base. However, the teachers expected to know the purpose of the assessment and to see results being well used.

The teachers were expected to be high performers. The schools had developed systems that had been set up to support teachers and to implement new assessment practices. However, a new form of accountability had emerged because teachers needed to be able to demonstrate that their new learning was being transferred to practice. The teachers were urged forward through rigorous feedback resulting from appraisal, peer assessment, the sharing and justifying of new practices and visits from other teachers and senior managers while they were teaching.

All schools had encountered challenges as they had developed their new assessment practices but they had not allowed these to become an excuse for a lack of progress. Solutions were found.

The case study teachers worked in stimulating, vibrant, demanding cultures and appeared to be thriving on and excited by the challenge. They believed in the changes they were making and they believed in their ability to make these changes in ways that would benefit students. They were used to discussing and justifying their ideas with other teachers and this was transferred to the way in which they were able to discuss assessment with the researcher.

Their learning had happened as an integral part of each school's professional development programmes. This had influenced them greatly. However, they were also prepared to study independently and to put in long hours to transform their practices.

Teacher Findings

Overview

This section is divided into seven parts. Each of these parts appears under relevant subheadings. The section begins by following the teaching journeys of the four teachers in their earlier days of teaching. It then explores their knowledge and beliefs about assessment and the assessment practices they currently use in their classrooms. The expectations the school places on the teachers are considered. The way teachers use various assessment

practices is explained and the culture and organisation of the classroom is explored. The section ends with a discussion of the teacher findings.

Changes to Assessment Practices since beginning Teaching

Assessment practices early in the teachers' careers

The teachers talked with a combination of amusement and cynicism about their early assessment practices. They all remembered using a lot of summative assessments such as teacher designed tests, checklist assessments and traditional testing. They used to carry out assessments that they often designed themselves within their own classes. There was very little sharing with other teachers.

Jane remembered assessment as being very structured. Teachers did a unit and a formal test at the end of it and recorded the results. She described assessments, which she remembered as 'tests', that were about students' knowledge and that did not include the processes of learning. The word assessment was not used. Debbie described a 'hit and miss approach' in her early years. She remembered assessment was more about what teachers did than what learners did while Suzanne talked about 'tick-boxes and checklists' and rolled her eyes.

Gina had only been teaching for six years but she recalled assessing at the end of inquiry units and the students not knowing what would be assessed. This oversight seems quite incredible to her now.

The teachers carried out Progressive Achievement Tests (PATs) and other tests and collected 'figures' with no clear purpose. Gina remembered a lot of standardised testing. She described the situation as, 'having all these numbers but no facts or evidence to teach with. What did one figure tell me about what they could and couldn't do and where I could take them?' Assessment at that time wasn't related to children's needs explained Debbie. Teachers did not write a lot about what students could and could not do.

Jane and Debbie talked about teachers working to the bell curve and keeping Progress and Achievement registers. Jane remembers ranking children on a scale of one to five. For instance, teachers only got a certain number of 'ones.' They had to fit the children to the curve.

Debbie mentioned the expectations for teachers to complete cumulative files. In her words, 'they meant hours and hours of work and they gave us no reasons.' She saw the recording of results in this way as a useless practice.

The period of change

The post-Tomorrow's Schools period was mentioned by the teachers as a time of questioning traditional practices and making positive change. This was when Debbie began to question the purpose of assessment practices in her school. She and the principal acknowledged the amount of paper work was not serving their needs or the needs of the children and cut this work right back. Debbie had only just returned to teaching and, while she found the changes that had occurred as a result of Tomorrow's Schools challenging, she liked the structure of them. She explained that teaching had become a lot less 'hit and miss' and more of a science.

Jane described the change at this time as huge and positive. Similarly to Debbie, it was during the 1990s that she remembers teachers starting to look at different ways of finding out about children's learning and giving them different assessment tasks. She explained that 'from there to where we are now is so much more about children being involved in their own learning and assessing and looking where they are going.'

The teachers' comments make it clear that even more rapid change has occurred recently. For example, when Debbie arrived at her school only six years ago, the children sat in rows with the teacher at the front and with their eyes on the whiteboard. However, she understood that children needed to discuss their work and that they could learn from each other. She put her class in random groupings and taught them the skills of working in groups. Suzanne talked about the last four years as a time where she had increased the emphasis on students' understanding and being involved in their own learning. She had increasingly tried to use 'learning language' with children.

The Catalyst for Change

The teachers talked about three primary sources of influence that have caused them to change and keep changing their assessment practices. These were school-based PD, learning and study they had initiated and key people who had challenged their thinking. Jane talked about PD and two key mentors who encouraged her to 'spread her wings' and take risks. Similarly, Debbie attributed her desire to change to her extensive personal study in educational theory and management and to the ICT contract she led in her school. Suzanne mentioned the new principal who had started about six years previously and who had questioned traditional practices and asked teachers about their use. Another strong trigger that had made her persevere with changes had been the dramatic shifts she had seen in children because of them. She found that she was able to 'turn around children with behaviour problems' with her new practices. For example:

I had a child last year from another school that came with huge problems with behaviour, violence and aggression. We put him through reading recovery and

raised his self esteem and got him to see he could actually learn and what the path would be and he ended up one of my model children. It was huge seeing that transition. He just gained so much from having more ownership of his learning.

Gina talked about PD and her own reading as the major influences. She had also needed to change her thinking to cater for working with like-minded learners in the self-directed learning class that was established in 2007. Taking responsibility for this class had required her to continue to adapt and change her approach to assessment.

The teachers' current views on assessment

All of the teachers now talked unequivocally about assessment for learning as the most important purpose of assessment. They had transformed their classroom practices to have a much greater emphasis on using assessment to improve student learning and to inform their teaching. They had developed formative classroom practices such as the use of rubrics and had adapted their classroom management systems to support this. Debbie explained that children now construct and understand their own learning.

The teachers said that all the assessment they do was purposeful and important. None of them could think of any practices that they did not find useful.

In all the classes children were involved in assessing to a high degree. They marked their own work or they peer marked and gave feedback to each other.

The teachers gave some good examples of some of the changes to their practice. One was the marking of books. Suzanne and Jane remembered sitting for hours after school marking. Gina talked about assessment happening with the students when they were at school. Debbie now marked fewer books at any one time and got students to mark homework in small groups. All the teachers talked about marking with students and giving feedback at the time instead. The comments they gave related to the learning intentions. The feedback was specific and often included next learning steps.

Suzanne talked about the shift in the way she gave feedback to children. Instead of giving ticks, stickers and positive comments she might now write, 'There are four errors here. Can you find them?'

Gina said that discussing the work with children was very important. She gave an example of adapting a practice to make it more student led. Teachers used to choose the samples for portfolios but this meant students had little ownership of them. The students now selected the samples and explained what they were learning and what the success criteria were. They assessed themselves against the criteria and recorded their next learning step. Gina thought that the changes to give students more input into their portfolios had turned a superficial practice into an individual and meaningful one.

The teachers were excited about the changes they had made and strongly believed that they were improving learning for children. Debbie thought that the formative assessment practices she now used were very helpful for students who used to struggle. Suzanne talked about students she has been able ‘to turn around.’

Relevant professional development

Table 2 summarises the learning experiences the teachers spoke about that have shaped their changing practices.

Table 2

Experiences Shaping Assessment Practices

	Jane	Debbie	Suzanne	Gina
Examples of initiating their own learning	Diploma in Counselling	*AST papers Educational Management Diploma	Much personal reading and self chosen PD in areas such as in the education of gifted and talented students	Much personal reading, use of websites, sharing and adapting ideas from teacher friends
School led professional development	Contracts on the new curriculum docs, staff readings, *ICT, numeracy and *AtoL contracts	*ICT and numeracy contracts	A strong internal, teacher led PD programme e.g. writing and moderation of work in teams and the ICT contract	Staff readings, ICT, numeracy, AtoL and subject specific contracts
Particular influences	Costa's Habits of Mind, The Enterprising Students' contract	The example of the school her own children went to that gave her a model for innovative practice	Guy Claxton's workshops on learning power	ICT contract because it gave her leadership opportunities, the development of the like-minded learners' class
Examples of new thinking and practices	The development of what she calls a teaching tool box that increasingly helps children take ownership of their learning	The development of school wide rubrics. Informing children about learning outcomes The development of a personal, comprehensive assessment programme that involves students	The development of a personal, comprehensive assessment programme that involves students	The development of a personal, comprehensive assessment programme that involves students. She now questions what assessment is for, what the outcome should be and what the purpose is

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Teachers' Knowledge of and Beliefs about Assessment Practices

Purposeful assessment

The teachers have developed very clear beliefs and understandings about assessment. The teachers would not do anything that was not purposeful. In fact, none of them could think of an assessment practice that they carried out that did not have a worthwhile purpose. Jane explained that she assessed what she wanted to find out while Debbie stated more forcefully, 'I consider whether the proposed assessment has a purpose. If it doesn't I don't do it.' Suzanne agreed with Debbie. She said that she would not do any assessment for the sake of doing it whereas she would have in the past. Gina agreed that assessment had to be meaningful. It had to link to the learning that she was doing in the classroom. She would not do anything that did not link or have a purpose.

Assessment Priorities

The two priorities for assessment that all the teachers were agreed upon were for children to understand their learning and for the teacher to use assessment for future planning. They considered that their teaching was now focused firmly on students' learning needs. In Debbie's words, this meant that the assessment had to inform what you were going to do or give parents information. Suzanne made sure that her assessments represented what the children knew and what they could do so that when she analysed the results she could identify next learning steps. Gina said that the key factors of importance associated with assessment were meeting student needs, planning and teaching and motivating students.

The Relationship between Teaching and Assessment

The teachers described the relationship between teaching and assessment in a number of interesting ways. None of them saw assessment as a discrete exercise. They saw a dynamic relationship existing between the two, with one informing the other. Debbie considered teaching and assessment to be a 'chicken and egg' thing. Assessment informed her teaching and teaching enabled the assessment. Similarly Suzanne and Gina explained the relationship as circular. In Suzanne's words, 'You used assessment to teach and then you reflected and changed your programme and came back and did more assessment and changed something else. It is almost like scaffolding each other.' Gina used similar language. 'Planning and assessment are very circular and you are going within it backwards and forwards. It is a bit like a flowchart really. You are going around in a circle but you don't have to stick to it. You can jump between the steps as necessary.'

The teachers tended to consider the purpose of the assessment very carefully before they decided how to assess something and they usually included assessment as a part of the planning process. The teachers used information for a variety of purposes. They talked

about knowing where children were at in their learning. Assessment was used to inform the classroom programme and to evaluate their teaching. For example, Jane and Debbie discussed using assessment to find out what had not gone well in their programmes. They addressed this through the next lot of planning.

Benefits of Formative Assessment Practices

All the teachers thought that the use of assessment for learning and the involvement of students in assessment were helping students engage and do well. The teachers talked enthusiastically about the benefits of classroom interactions that had an emphasis on assessment for learning. Suzanne prioritised formative assessment practices because she considered that they 'empowered learners.' Debbie and Gina mentioned that they thought their new approaches were particularly helping students who were at risk of not achieving. Debbie explained that the students who found it harder to catch on to new concepts and manage their own learning were doing well. She said:

These students get more support with this style of interaction between students and teacher and between students and students because the students get very good at supporting each other and they start to know who needs support. And if you set up the right climate, they are very good at helping each other out.

Suzanne talked about how it has helped her 'turn some students back on to learning.' Gina emphasised the importance of assessment in motivating students and helping students to understand where they were at and establishing where they wanted to be. They were also clear about where they wanted to be and what they had to do to get there. She talked about the questioning and oral language skills that students were learning in order to clarify their understandings.

The Place and Use of Summative Assessment

Summative assessment was definitely taking a back seat to formative assessment in the teachers' thinking. Debbie used some summative assessment but it was generally based on the processes of learning rather than the assessment of knowledge. For example, in science, they may focus on how to manage an experiment with a purpose. Gina, who as a younger teacher did not go through the earlier days where the emphasis was on summative methods, didn't consider summative assessment to be part of her thinking at all at present. She thought it would be 'interesting to see if we would get to a stage where they both could sit.'

The teachers had found ways to make the information gained from summative assessments more multipurpose. They all appeared comfortable with the notion that one assessment task could be used both formatively and summatively. Jane explained that some of the

assessments that she had used in the past for summative purposes, she now used formatively; as in for learning. Debbie said that any one assessment could be both. For example, she might notice from a summative assessment that the whole class was having trouble with an aspect of fractions so she would use that area as a starter for the next week. Working from the opposite direction, Suzanne would do an assessment when she noticed an individual or class issue that she was not sure about. She used this information to decide what to do next. In other words summative assessments were often also used to inform future teaching.

Jane thought the most important aspect of summative assessment was the development of benchmarks to work from. These could be used to establish where students 'were at' and used in addition to any classroom assessments. The teachers also used the information collected for school-wide purposes at a classroom level. Jane explained that this data could be used well to inform learning. For example she had shared the data gathered from the AsTTle test with individual students and this had helped students to understand what they needed to focus on.

Assessment Practices in the Classroom

Commonalities between the teachers

There were many similarities in the assessment practices that the case study teachers were using in their classrooms. For example, all the teachers talked about giving specific feedback to students, sharing learning intentions and using success criteria so that students knew what they needed to do to achieve a given learning outcome. The adoption of these new approaches had come about through their professional learning, either through the AtoL contract or internal professional development that had been based on books such as *Unlocking Formative Assessment* (Clarke, Timperley & Hattie 2003) and *Clarity in the Classroom* (Absolum, M.2006)

They all used ongoing conferencing with individual students, some formal testing, rubrics that explained expectations for different levels of achievement, goal setting and self and peer assessment.

The Development of Personalised Assessment Toolboxes

Each teacher had developed a comprehensive system of assessment that fitted with the expectations of the school but that had been personalised by the teacher. What was very clear was that each teacher in each different school context had developed her own combination of 'assessment for learning' strategies. Jane mentioned a 'tool box' and this analogy reflects the findings of the study. The teachers had interpreted quite differently how

new assessment strategies would look in practice and how they would be used in conjunction with each other.

School-wide professional development and staff discussions had had a major influence on how certain practices had been shaped and generally understood by the whole staff of each school. However it had emerged from the interviews with teachers that they had the final responsibility for implementing new practices. They had done this with the needs of their particular students in mind. Much skill, individual interpretation, continual trial and error and ongoing adaptation and improvement of new ideas had been required.

As the teachers had developed their systems, they had placed more or less emphasis on certain aspects of assessment depending on what the requirements of their schools were, what the school staff had worked on and what they had found worked well in practice for them.

At School A, the staff had developed the use of continuums because it was a system they had decided to use as a fundamental aspect of their portfolio development throughout the school. Therefore, it followed that Jane had developed a system of self assessment that was largely based on students positioning themselves on various continuums. Jane and her teaching partner also used various continuums as a visual prompt for students. Continuums were displayed on the whiteboard so that students could continually refer to them. Through this emphasis on continuums, Jane believed that her students had developed an acceptance of where each other were and an understanding of learning as a journey. They knew that there was always another step to take.

For Suzanne self assessment and goal setting were strongly aligned. She mentioned goal setting as an aspect of her assessment programme that was working particularly well. It appeared she had developed and implemented a process of goal setting with her students that had become an important anchor that underpinned other practices that occur. For example, she used rubrics in conjunction with goal setting so that children could identify if they had met their goals through comparing their progress with the criteria on the rubric. An aspect of self assessment was that students constantly assessed their performance against these goals. Students had their goals written on laminated card and attached to their desks. These were constantly referred to, reviewed and updated.

Reflection at the end of a unit, a day or a week was a feature that Jane, Suzanne and Gina mentioned. The way in which this happened was dependent on the assessment strategies that had been developed and the interpretation of the teacher about what needed to be reflected on and how this was to be done. Gina talked about a type of reflection that she called End Product Evaluation. Gina described this as, 'Did we meet what we were aiming to create?'

Suzanne and Debbie used anecdotal notes extensively. These were a big part of both of their assessment systems. They provided them with individual information that helped them remember about, and address, particular needs they had noticed during teaching.

Gina had developed some interesting extensions to her assessment strategies. In her bigger picture thinking about how to best meet the needs of her 'like-minded' learner class, she had thought 'outside the square' about extending some practices. For example, she had introduced the opportunity for students to re-present their work to try to improve on the aspects that were identified as their next steps. They did this with speeches where they gave their speeches a second time after responding to the feedback they had received.

Different Strategies that Meet Similar Purposes

Although each teacher had developed a stronger emphasis on different aspects of assessment, the different strategies often met the same purpose. For example, School A was the only school that had developed continuums that showed students where they were and where they needed to go next. No other school had developed this strategy in this way and this had been a primary influence on Jane's assessment programme.

School B had developed the use of rubrics as a fundamental tool in the same way that School A used continuums. For example, they had a school-wide progressive rubric that indicated the steps they wanted students to take as they learned the steps of an inquiry approach. This was translated by each teaching team into language that was suited to the age and stage of the students. The rubrics at School B served a similar purpose to the continuums at School A.

At School D the staff had developed 'beginning, proficient and advanced' categories to be used throughout the school so that students knew where they were at and so that they knew where they wanted to get to.

All the case study teachers used rubrics that showed progressive criteria. At Schools A and B, they were used largely for inquiry studies, with the criteria being based on the processes of learning. However, the teachers operated and managed the use of rubrics differently. They were also beginning to co-construct rubric criteria with the students. Teacher's comments suggested that they felt they needed to establish a good understanding of how they would use the concept of rubrics successfully before they involved students in developing them.

The Influence of School Assessment Expectations on Teachers' Classroom Assessment Programmes

The teachers appear to accept the place of school-wide data collection as an integral part of their assessment programmes. They talked about collecting set information at certain times

and recording it on data-bases to be analysed. Analysis was carried out by senior school managers and the results were reported back to teachers in ways that were unique to each school.

Each teacher followed the expectations of the school assessment schedule to collect the information that was required for school-wide statistics and for accountability purposes such as reporting to the MOE and the community. All the teachers had some requirements for school-wide assessment but these didn't seem to be a conflict for them.

They were more comfortable with this school-wide expectation for two reasons. Firstly, they were also using this data to inform and focus of their classroom teaching. Some were beginning to let students use this data directly to identify their strengths and next steps for learning. Second, as Debbie explained, the information was being used at school-wide level to provide what they considered to be worthwhile targets for improvement and to monitor student progress and achievement.

All the teachers talked about spending hours collecting assessment data for very little purpose in their earlier days of teaching. They were all adamant that they would not undertake assessment that does not have a purpose. The fact that they can see this information being used seems to justify the requirement to collect it.

The Ways the Teachers Use Various Assessment Strategies.

Below is a list of the assessment practices that the individual teachers talked about. This list does not necessarily include all the assessment practices used by each teacher; just the ones that came to mind during the interview. This information serves to illustrate to the reader the different perspectives and emphases that the teachers place on various strategies. The individual teachers' explanations of each strategy are included to indicate the way they chose to speak about their classroom assessment practices. Two of the teachers also spoke about next development steps for their schools.

Jane

Continuums: These had been developed so that students and teachers could assess against the criteria that had been developed for each key curriculum area. Continuums were also used in portfolios so students could explain where they were on a given continuum to their parents. Continuums made the progressions of learning and the 'where to next' clear.

Rubrics: These were used in inquiry studies to assess the learning processes students were acquiring. For example, the focus was on 'questions' at the moment so teachers had decided on categories that showed three levels of questioning. Teachers had come up with the rubric categories but they were in the process of 'letting that go.' They would create them more with the students in future.

Goal-setting: Students set weekly learning goals. Jane said some of the goals were very simple.

Reflection time: Teachers were trying to have a reflection time with students once a week about how they had gone, what was happening in their learning and what they needed to focus on to learn better.

Ongoing conferences: These were between the student and the teacher on an individual basis and were based on the question, 'What do you need to do to move yourself along?'

Feedback: There was a lot of verbal assessing with individual children and feedback and feed forward as the programme continued.

Formal tests: These were tests like AsTTLe and PATs that were used for accountability purposes and analysed to track for gaps and strengths in student learning and to develop benchmarks and targets. Analysis happened at management level and was shared with the staff

Team target setting: Teachers developed their own team achievement targets that they had identified as a group of teachers. The team targets were relevant to the team and were used to inform the programme.

Moderation: Processes were in place for staff to share work samples and for students to be informed of their next steps. Moderation was a regular activity at team level.

Giving students their results: The teachers had just given students their AsTTLe results to identify their own strengths and weaknesses. Students wrote these down; for example, 'in algebra I need to focus on... and so.....'

Next step for assessment practices: Where to bring in the assessment of key competencies was a big issue. Jane wanted to involve the key competencies in planning and as a feature of the continuums used for reporting to parents. The children needed to know what they needed to do to achieve a key competency and in the end that was going to make them better learners.

Debbie

Rubrics: The rubrics Debbie used had four categories. Children assessed themselves against the rubrics and used them as a guide for learning. Debbie said that some children were very realistic about where they were at and others found this a difficult skill. Debbie often co-marked the rubric. A challenge was to 'gently explain to children who were unrealistic why she saw them as being in a different category.'

Debbie said that the students got better at it with practice but some had not developed that awareness. About one third of the class needed more maturity to see where they fitted as far as assessment went. A strength was that the students started asking questions about what they needed to do to be successful against the rubric criteria. If the criteria were well written they were a great tool for this task. At times, the students came up with the categories for the rubric. They were very good at this and Debbie said it was not overly time consuming.

Self assessment: Students had various opportunities to assess their own learning.

Portfolios: These went home to parents and written reports were also sent at the end of the year. Debbie had set up her assessment practices so that they were aligned to what was going in the report and could be easily transferred these.

School data collection: The school collected data and the principal analysed it. The teachers had been doing this for some time and had a good idea of the achievement and progress of individual students and various cohorts of students. Debbie said, 'It is very difficult for children to fall through the cracks here.'

When Debbie was asked what aspect of assessment was going particularly well she talked about whole school assessment; for example, they compare one year's PAT results to the next. The senior managers track and graph running records results. Any children dropping down are picked up by special needs staff. Recently, all teachers assessed an aspect of the inquiry process so they could analyse and discuss the information gathered. Teachers planned together so there was a uniform approach to assessment.

Suzanne

Tests: Suzanne used AsTTLe, running records of reading, Supplementary Tests of Reading Achievement (STAR) testing, The Individual Knowledge Assessment for Numeracy (IKAN) snapshots, pre-tests for other mathematics strands and diagnostic spelling assessments to identify what the students' needs were. She used this information to plan work for individuals or groups. She used knowledge gaps she had identified to run class sessions or work with particular groups or individuals.

Anecdotal note: Suzanne made a lot of anecdotal notes; for example, about what she noticed during group work. She also took anecdotal notes about how well students were managing their own learning. She saw the development of the key competencies of learning as integral to everything and included them in her planning.

Goal setting: Children recorded how they would go about working on their goals and what it will look like if they were successful. They reflected on their goals and their progress towards achieving them.

Use of learning intentions and success criteria: The intention of learning was made clear and the criteria for success were usually co constructed with the children. This was going particularly well for Suzanne and her class.

Rubrics: Students often used a rubric to identify whether their goals were met. They recorded their next steps as well as receiving the teacher's written feedback.

Self marking: Children often marked their own work.

Feedback: This was an aspect that was going particularly well for Suzanne. Suzanne gave a lot of oral feedback and some written feedback.

Peer assessment: This was a big feature of the class assessment interactions and was used alongside the sharing of ideas. Students identified what their next steps were with each other, often as partners.

Gina

Assessment practices

Guidelines and categories: Students knew what was being assessed the whole way through. They had guidelines. Throughout the school they used 'beginning, proficient and advanced' categories so that students knew where they were at and they knew where they wanted to get to.

Rubrics: These were used widely.

Pre and Post-testing: Pre-tests and post-tests were used, predominately in mathematics. Diagnostic tests were used to clarify students' learning against the numeracy stages. The pre-tests were marked with the students and they decided together what they needed to focus the programme on. Students also looked at their post tests and could see and evaluate their progress. It was clear for the student and the teacher. They knew they were learning.

Workshops: Gina looked for common gaps in understanding or common needs or interests and ran workshops on these things. She noticed these needs as she worked alongside students. All individuals could see the things they needed to work on so they could be at the right workshop.

Teacher/Student Discussions: The students' own assessment of themselves against the rubric or exemplar was matched with the teacher's assessment. If there was a disagreement, Gina put it over to the student. 'What can you show me that shows you are Level 4?'

Feedback: Gina made specific comments such as:

I really like the way you have done this, this and this based on the criteria. This one is not so evident or this one is where you are going to next.

Student self feedback: The students could also give feedback to themselves. It was a partnership. 'They have the criteria which have been set at the beginning; it is right there. They have learned alongside the criteria.'

Looking at process and product: An example of this was in the inquiry process. Gina decided with students what the key steps were. They learned about those and assessed their skills against those. They assessed each step and looked at themselves in terms of the criteria for that.

End product Evaluation: Gina described this as, 'Did we meet what we were aiming to create? For example, if they were creating a newspaper, did it have all the key things that students identified that it should have?'

Highlighter marking system: This was linked to use of rubrics. The teacher used three different coloured pens as a code to highlight various aspects of a student's work. Students understood the code.

Exemplars: These were shared with the students as good models. Gina got them to identify key parts. They compared their own work against the exemplar. Gina might ask 'Where do you think your piece of writing reflected this?'

Re-presenting Students had opportunities to practise and re-present work they had done. For example, students used feedback about recent speeches to re-present and attempt to improve on the areas upon which they needed to work.

Learning Intentions and Success Criteria: These were in place across the whole curriculum now so that children would always know the purpose of the learning and what they needed to do to get there.

Next steps: The school was beginning to look at e-AsTTle. Another teacher was evaluating this tool to see what it might mean in terms of our learners. 'Every decision was qualified. They asked the question 'Would it give us the right information? It was not about what was the latest bandwagon and were we behind the eight ball but this is out there and would it work for us. Would it help our learners?'

Gina thought she was on the brink of saying 'If this was what my class is doing, where would it put them in terms of the national norm?' She believed the school now needed to look at standardised testing against norms.

The senior team, including Gina, was working with an assessment advisor to learn to use data. Each team had collected data. Her team looked at data for physical education and what it meant for their teaching.

Culture and Organisation of the Classroom

All the teachers had changed their thinking about the relationships in the classroom. They had all, to a greater or lesser extent, changed the power relationship between the teacher and the students. Two also mentioned the need 'to let go more.' The two Year 7 and 8 self-directed learning classes were the most different in actual structure. The schools had set these classes up to allow students to take a high degree of responsibility for their own learning. This included extensive student participation in the assessment process. Students made choices about what and when they would learn. They were taught to support each other's learning.

In all the classes, students were expected to work extensively in groups. Some teachers were explicitly teaching the skills of group work. Students were encouraged to ask each other for support and guidance rather than just the teacher. It appeared they did this and generally did it well.

Jane had noticed a big difference in the interactions between students. She talked about how accepting and supportive of each other the students were and how they worked flexibly with different people. Gina believed she did not hold the power in the classroom and that she saw herself as a learner and so did the students. Like Jane, she talked about the cooperative relationships, the lack of cliques in the class and the fluid interactions and self groupings of students. Suzanne had younger children but was clearly thinking about the power relationships in the classroom when she mentioned she had released some control and was giving students more choice. She was proud of the fact that when she left the room the children could continue to work well without her input. Debbie talked about the balance needed between her input and her guidance. This indicated she was also thinking about the power aspect of the student/ teacher relationship.

Gina appeared to have gone the furthest in terms of thinking about the classroom in less traditional ways. She had renamed the classroom as a learning centre, had parents coming and going to support the students and allowed for the room to be changed around to suit the changing needs of the learners. She allowed the students some choice in their record keeping and presentation.

Discussion

All the teachers attributed the initial changes to their assessment practices to the professional development contracts in which they had been involved. These contracts had

had a substantial impact on their thinking about assessment and, subsequently, on the assessment practices they employed in their classrooms. They also talked about how the internal PD in their school influenced their practices and about other study they had done or were doing of their own volition that helped them further their thinking. Jane talked about the 'teaching toolbox' that she had developed to dip into when appropriate. Debbie believed that the establishment of the substantial use of rubrics for assessment purposes had had a great impact. Suzanne discussed the collaborative team work that went into moderation and internal PD that led teachers forward. Gina talked about the influence of staff readings and how PD had been the impetus for her carefully considering the purpose of each assessment. All the teachers showed interest in furthering their own learning to improve their practice.

Each school had developed school-wide processes to support teachers in considering and continuing to improve their assessment practices. These processes include moderation at team meetings, the senior team's leadership of internal PD on assessment, the sharing of relevant readings and the establishment and review of certain formative practices. For example, Debbie had led the development of the progressive assessment rubrics that had become a major assessment tool at School B.

Student Findings

Overview

This section summarises the student findings. It is divided into six parts. Student understandings and knowledge of assessment are discussed first. This is followed by students' descriptions of their classroom cultures and systems, what students consider the characteristics of a good teacher to be and their attitudes to learning and knowledge of the learning process. At the end of the section, the questionnaire results are graphed. The section ends with a discussion of the student findings.

Student Understandings and Knowledge of Assessment

Students at Schools B and D were particularly articulate about the purposes of assessment. One student described it as 'assessing your own development or seeing how much you have learned or are going to learn.' Another said, 'It lets the teachers know what they need to do to help us progress.' The students' understanding of assessment at School D was best expressed by a student as, 'It is the teacher or us thinking about what we have done all day and all through the year and assessing ourselves on what we have done, what we think we can do and what we need to do next.' Even the younger Year 4 students at School C explained that assessment was a way of assessing yourself and letting you see how well you had done.

Interestingly, none of the groups of students perceived assessment to be a primarily a teacher judgement about how well they did. They did not talk about assessment in terms of its summative function or as being a definitive or uncompromising result that gave you a position or ranking of the class. Their comments implied that an assessment showed you where you were at and where you needed to move to next. They assumed their own responsibility for, and involvement in the process. This was reflected as they spoke about assessment being about 'knowing how well you had done' or 'seeing how much you have learned or are going to learn' or 'what you think you can do and what you are going to do next.'

The students appeared to position themselves as partners with their teachers in the assessment process but deferred to their teacher's greater knowledge. For example the students at School A explained how they put their self assessment of their achievement on a continuum but this was just their judgement of 'what they thought they were capable of.' Their teacher co-marked by putting the mark 'where they actually were. At School C, they explained that they could self assess, or classmates could assess them but that it was the teacher who had the power to put them in a group to help them.

Knowledge of types of assessment

In all the groups the students spoke of various types of assessment and all the Year 7 and 8 students had a good understanding of the purpose of each. The groups mentioned that teachers made it clear at the beginning of a unit what the learning was about and shared the success criteria with them at that time. They said this practice meant that they were very clear about what it was that they are trying to achieve and how to get there. The Year 4 students were less able to explain the purpose of assessments but had some idea. For example, one of the students explained that goal setting made it easier for them to learn and for the teacher to know what she needed to do to teach them.

The primary place of goal setting

The students all took part in goal setting and found it motivating. Students took goal setting seriously and considered that it helped them focus their learning on their own needs. The students at School A said that the main motivation for taking goal setting seriously was because they were accountable to their parents at conference time. The students set their initial goals with their teachers and parents so the pressure was on them at mid-year conference time to show that they had progressed. The Year 4 students were able to talk knowledgeably about goal setting and how their class goal setting system worked. They were all able to articulate a goal they had set and these were quite specific. For example one student said, 'My goal is numeracy and we have these basic facts tests two times and my goal is to get a score of around 70 to 90 percent.' School D students explained goal

setting as a way of focussing students on the tasks ahead. They were motivated by the weekly conference they had with their teacher to discuss their progress.

Knowledge of next steps

Students at all the schools were able to talk knowledgeably about their next steps. For example, it was interesting to hear a Year 4 student at School C talk about 'needing to learn to skim and scan for information.' The next steps each group shared were specific in terms of wording. Students at School B considered that their next steps were worthwhile, accurate and important.

Differences in student opinions between schools

Students placed differing value on particular strategies at the different schools. For example, the students at School A talked about the We Are Learning To (WALT) statements that their teacher shared at the start of units to make the learning intention clear as being of little value. They did not think they helped people focus and considered that most people just forgot them. In comparison, the students at School B felt that the learning outcomes that their teacher shared with them at the beginning of a topic were very useful in guiding their understanding of what they needed to achieve in the end.

Description of classroom culture, organisation and systems

Formative assessment practices put the onus on students to take responsibility for their own learning and this changed the classroom culture. The students described busy, often noisy, social classrooms where a lot of different things could be happening at one time.

There was a lot of verbal interaction between teachers and students and among students. Students mentioned a high level of spontaneous and informal feedback that occurred between the teacher and individuals and small groups and some regular planned conferences with their teacher. The discussions between teachers and students focused on the common learning needs of the individual or the group. At School B, the students explained that the main types of conversations they had with their teacher were about what they could do to make their work better and she asked how they felt about their work. She made instructions easy to understand. 'They felt they would not get confused.'

Students talked about working frequently in teacher and self-initiated groups and pairings. They explained that they worked alongside other students informally as well. For example, students at School A talked about how they asked each other for support and explained that they, 'just kind of worked with people. Someone else who had already done a particular task would explain it to you.'

School B students said that in their class there were a lot of group discussions and choice about how to work and with whom to work. The classroom could be busy, quiet or noisy. Students got on well together and mixed well. They were used to working in different groups and thought that the class as a whole had well developed cooperative skills. The students said that cooperative skills were important and that they learned a lot off each other. One student explained that, 'Their different opinion could change yours or they could be more knowledgeable.' They worked in groups to mark homework and the teacher looked at their work after this. Members of the class felt comfortable around each other. There was no awkwardness. They talked openly about what they were thinking. They enjoyed the level of choice they were given. They felt they had developed a high level of awareness about containing their own possibly annoying behaviours and about using the strategies they had learned to cope with distractions. They said that this awareness helped people to focus on their work.

The Choice Offered in the Two Self Directed Learning Classes

Students at School A had some reservations about the level of freedom and choice offered to some students but enjoyed the level of choice for themselves. In their situation, the students and teachers could be working in either of the two open plan classrooms. One student said and the others agreed that, 'If both teachers are in one room, the other room gets real noisy and people run around sometimes.'

The students considered that the highest degree of choice was in inquiry learning and homework.

We are not all sitting at our desks, all sitting there copying off the board or listening to the teacher. If you are doing inquiry you might be ringing someone up or looking something up on the internet or making a slideshow. It is quite chaotic at times with people doing different things.

School D students talked about how they planned their own weekly timetable around some givens. There was a system of whole-class teaching, compulsory sessions like mathematics interchange and optional workshops and mini seminars. Students particularly liked the fact that they were allowed to work at their own pace. They enjoyed the flexibility of their day and not having to wait for others. They talked about getting to choose about eighty percent of what they did and when they did it.

The Teaching of Skills

In all four classes, the teachers consciously taught students to develop the skills they needed to cope with the level of independence required and the skills of group work.

The Year 4 students said they worked in a lot of different groups for a lot of different things.

Their teacher was working in a more structured way than the teachers of the older students to help students develop the necessary skills. She had introduced the concept of class goals. The students told the researcher that they were currently working on partnership and participation to support the group work and make it better. One student expressed his understanding of this as 'You don't say hey it's my turn. You encourage people to have their turn and have yours after.' When it was suggested that some people found it hard to use the skills of group work they referred to the school motto, PRIDE. A student explained that this stood for partnership, participation, responsibility and respect. The 'I' stood for integrity, the 'd' for determination and the 'e' for excellence. They were able to talk about how they needed to practice these things. Their class goal was partnership at this time and they had all written down things they needed to do to show partnership. In addition to this, they all had an individual PRIDE goal that they were working on.

At School B, the class spent the whole first term learning about learning styles. They were constantly reminded about how they learn because they had a wall display about what helped them learn. The students spoke proudly and knowledgeably about their 'Smarts' meaning the particular ways of thinking in which they were strong. Students in this group, in particular, were motivated by their knowledge of themselves as competent learners. However they were also aware of their areas of relative weakness. They explained that these were areas to work on and develop so that they could be 'well rounded' learners.

All the Year 7 and 8 students said that they felt they had adapted well to being given more choice. One School B student put it this way. 'People realised what their distractions were and the people who were distracting became aware of it and stopped doing it.'

Time Management and Student Accountability

While only Schools A and D had classes that were labelled as for self-directed learners, the School B students had similar levels of choice in some areas. Their teacher encouraged and expected similar levels of independence. This was reflected in comments such as the students saying that they were expected to get to a certain stage in a week and if they did not 'it is your problem.' They saw this as an exercise in time management and considered that it motivated most students to work consistently so that they did not have a lot of extra homework.

The two self-directed learning classes seemed to have required students to make the biggest adaptations to learning with a high expectation of independence. However, the systems developed at School D seemed to be more comprehensive and structured than those at School A.

At School A students used planning books and filled these in at the start of each week. There were choices for some things but not others. On Fridays, the students filled in a

checklist and touched base with the teacher about their work. However, the students talked about 'a looseness' around this organisation. Some students did not take their responsibilities to be self-directed seriously. They did not always complete work to a high level or interact with their teachers with the level of commitment required to be successful learners. Their teacher said that she was still working on the systems that best supported the students to work conscientiously. She was aware of the need to modify and further develop the supporting structures.

At School D the teacher had established very clear systems and was relentless in ensuring that they were followed. Students had a large number of areas about which they could make choices but there were also strong accountability and monitoring systems. Students understood that the systems had been set up to monitor and guide their learning day. The teacher explained the weekly independent tasks once a week. Like School A students, the School D students were asked to complete a weekly timetable in detail but they were also required to complete a checklist as they finished each task. The teacher had a large pin board so that she could see where everyone was at and students could see where they were up to. One student commented, 'There is checking up on you all the time but it's not an annoying sort of checking up. In a normal classroom the teacher checks up on you but it gets annoying. They are in the way and it kind of distracts.'

What Students Considered the Characteristics of a Good Teacher to Be

All the students were able to make some comment about the skills a good teacher needed to have to help with learning. The comments at Schools A and C showed that students realised that teachers needed to be available and able to help students come to their own understandings. At School A the students talked not so much about expecting to be told what to do but about having the steps that would help them do it explained to them. The students felt they were able to be more social with their teacher because of the classroom culture that had been developed and because their teachers got more friendly towards them. You felt more comfortable and you understood each other more. One student explained:

They don't tell us what to do. They explain how to do it. You learn their weak spots so they become more human.

They appeared to see their teacher as a problem solver who aided all students in their own learning process. In the same vein, the clearest of the responses of the Year 4 students was, 'Our teacher helps us out. She doesn't give us the answers. She just helps you understand it.'

Students at School's B and D were more interested in talking about their relationships with their teacher and the personal qualities required to teach well. School B students said that a

good teacher needed to care, to have a good sense of humour, good discipline and an understanding of kids.

They treat you like you are older and accept you the way you are. They needed to know what they were talking about and they needed to be passionate about what they were teaching. They had to be confident.

One student expressed it this way:

We have a good relationship with our teacher because we can talk to her and she can talk to us. We can tell her the truth about what we think about the work. Sometimes she will agree with you and sometimes not but she won't yell at you if she doesn't like what you think. And she encourages. She always listens and helps you to understand more.

Similarly, School D students talked about their teacher as being like a friend who would talk with you and do things with you. They discussed being treated as mature people. One student mentioned the teacher's good judgement. She noticed when people were doing good things. She was trusting and understanding and gave them choices. They spoke of a good teacher treating students with respect and that they respected their teacher in return. Students observed their teacher as a person with many responsibilities around the school. They felt that she must get very stressed but that she did not show it.

The comments of these two groups of students reflected their appreciation of being respected, treated as mature people and appreciated for their individual qualities as people. The comments from School B students about teachers needing confidence and the empathy of School D students with their teacher's apparent stress levels reflected an understanding and appreciation of their teachers' personal qualities.

Attitudes to Learning and Knowledge of the Learning Process

Skills required to be a good learner

When asked what skills were needed to be a good learner all the students were able to discuss the personal qualities required.

School A students believed that good learners needed to be on task a lot. They needed to be confident and ask when they were not sure and they needed to be someone who cared whether they got work done or not. They needed to understand the task that had been set and to comprehend what the task was asking. 'You need to know you are doing the right thing or ask if you were unsure was important.' To succeed in this class, you needed to be very self-motivated and focused.

The students at School B described a good learner as being someone who could listen and think. Their whole attitude needed to be positive and focused and they needed to be hard workers. They needed to want to learn, to have good communication and listening skills and self control. They needed to be independent but able to work with others as well. They liked the fact that their teacher treated them as though they were older and asked more types of questions; 'more complex ones.' They had realised that there were thirty people in the class and only one teacher so they needed to learn off each other as well.

The School C children felt that a good learner would concentrate on what the teacher was saying, concentrate on the activity and stick with the activity while trying not to be distracted.

Having a positive attitude, caring about your work and being self motivated and a hard worker were mentioned. Staying on task, sticking with the activity and not being distracted were seen as important. Cooperative and group skills were also seen as a priority. Even one of the younger students was able to plot his progress and that of the class in saying the students had come a long way with learning new things and working better in groups.

The need for a transition period

The comment by the students at School A about the adjustments they had to make to their attitudes about learning highlight the fact that there is a transition required from a more traditional classroom to one that required the skills of self direction. The students feel they had gradually and slowly changed their attitudes to learning. One explained:

You ease into it and when you go back to your old class it seems really slow and quiet. Boring! You always have time to catch up. You have time to come back to things.

At the start of the year, School C students said they were scared and not very confident but now they knew how to behave and learn in this class. One boy said at the start of the year he was a bit silly but now he was good for the teacher. Another student said:

We have gone a long way with learning new things and we are working better in groups and learning more.

Enjoyment of School

The case study students enjoyed school and were interested in their work. School D students talked at length about what contributed to their enjoyment of school. They described their class as being 'tight.' They saw the class as being social and noisy but in a good way. Students still did their work but they commented on the humorous interchanges that occurred. Their summing up of the class was that it was fun and they described the students as enthusiastic, hard working, independent and bright. They talked about working

in groups often and felt the necessary skills to learn well in this situation were to be friendly and understanding. They described their class as interesting and believed people enjoyed being at school so much that they got tied up in their work and they did not want to stop. The inquiry topics were exciting and different to those of the past so 'you just wanted to keep going.'

Improvements suggested by students

School A students unanimously agreed a few students in their class needed more structure. They needed to be told 'what to do not how to do it.' They needed the teacher to break it down into little chunks for them more often. These students were annoying to the rest of the class.

At School B, during the questionnaire, two students gave a mid way score in relation to whether the maths they did met their needs. They were able to explain how the learning had not met their needs on occasions. They suggested the highest group could be extended more. The researcher asked them if they felt they could talk with their teacher about this and they said they definitely could. They felt she tried to adapt work to their abilities.

Questionnaire Results

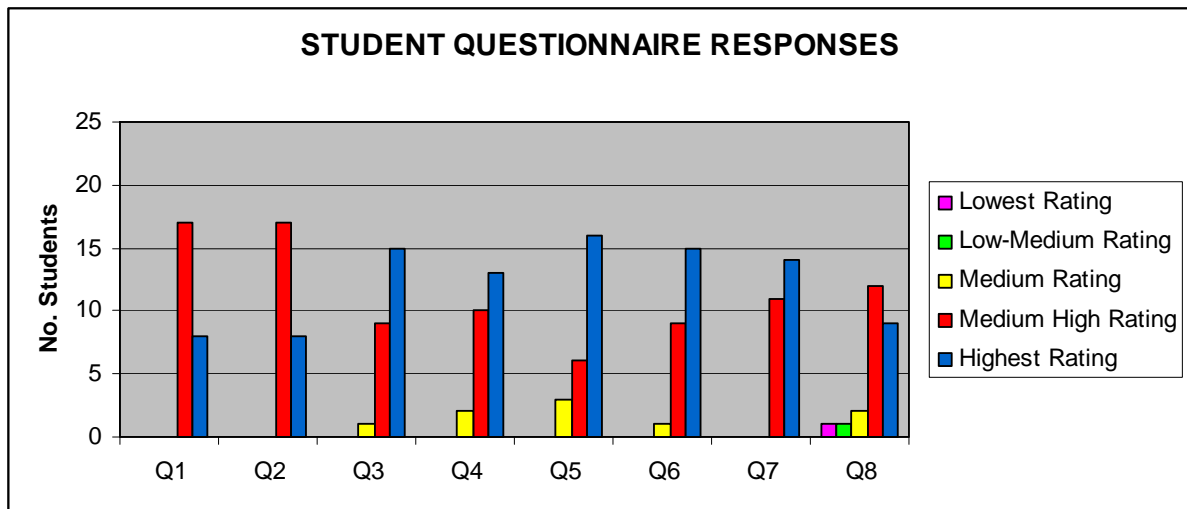
The questionnaire results showed very little variation from school to school. On each item the ratings on the continuum were high. Nearly all of the twenty-five students from the four different schools rated each item as a four or a five on a five point scale. Individual graphs for each school are included in the appendices as evidence for later discussion about any small variation in findings from schools to school. (See appendix J)

The bar graphs and pie graphs below show the combined ratings of the twenty-five students in the study. Each question indicated in the bar graphs is also shown as an individual pie graph.

The graphs are presented under two headings. The first set of graphs shows the results about students' general beliefs about assessment. Figure 3 shows questions 1 to 8 of the questionnaire as a bar graph and this is followed by individual pie graphs for each question. The second set of graphs presents the information about students' perceptions of their work and level. Figure 4 shows questions 9 to 16 on the questionnaire as a bar graph and this is followed by individual pie graphs for each question.

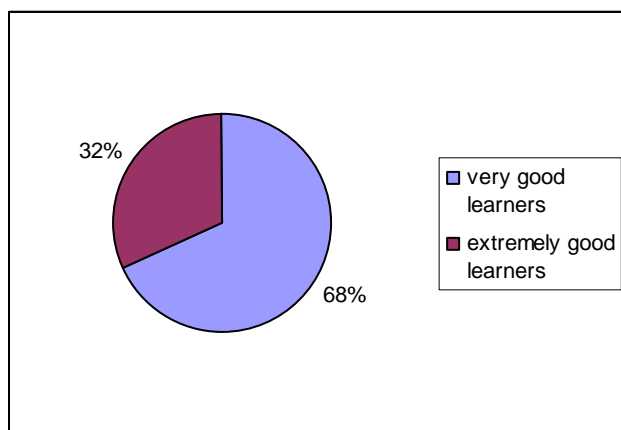
General beliefs about assessment

Figure 3-Questions 1 to 8



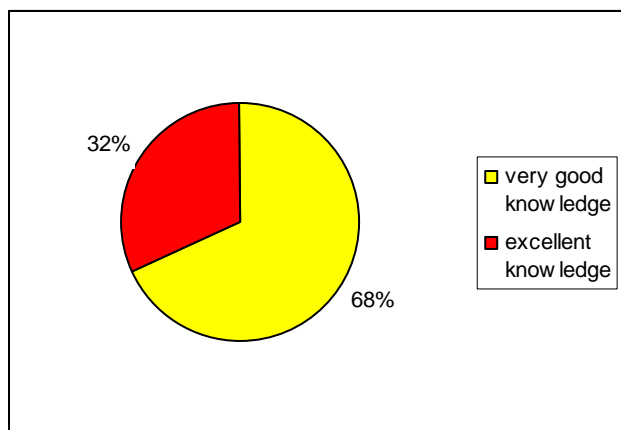
Q1. Student ratings of their learning skills

All students rated themselves as very good (68%) or excellent (32%) learners



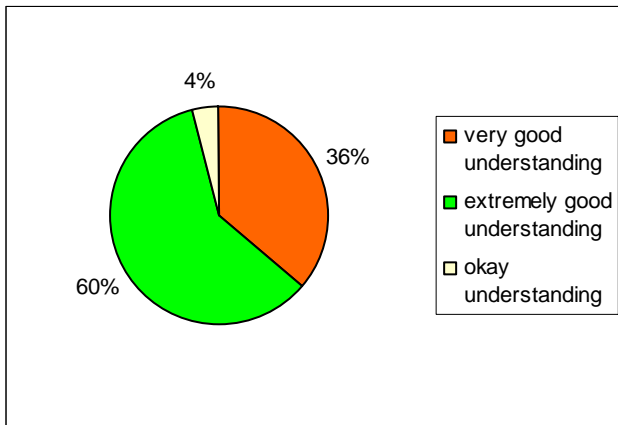
Q2. Student knowledge of how they learn

All students believed they had a very good (68%) or excellent knowledge (32%) of how they learn and the learning process



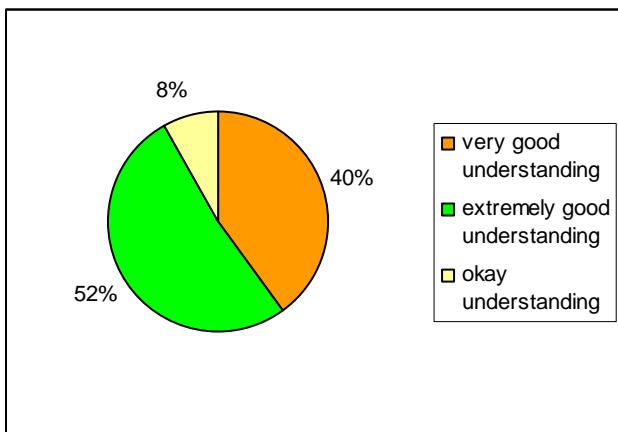
Q3. Student knowledge of strengths and areas for development

All students except for one believed they had very good (36%) or excellent (60%) understanding of their own learning strengths and development



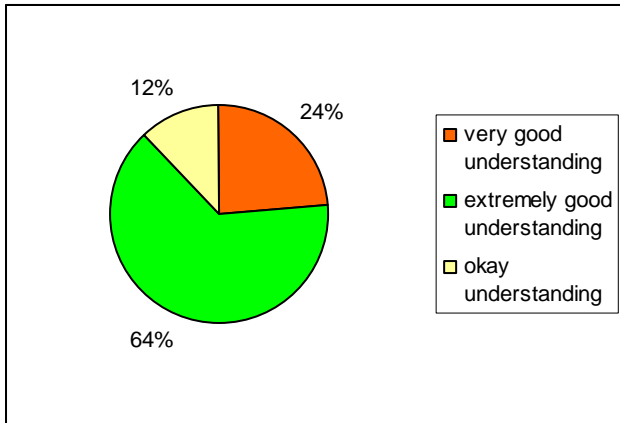
Q4. Student understanding of achievement and next steps in reading

All students rated themselves from okay (8%) to extremely good (52%) on the scale of understanding their achievement and next steps in reading



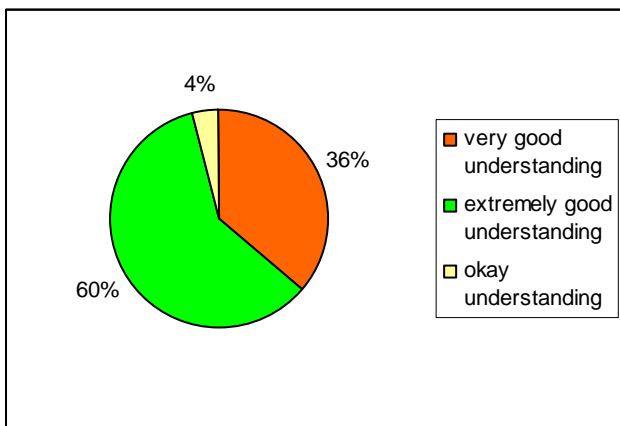
Q5. Student understanding of achievement and next steps in writing

All students rated themselves from okay(12%) to extremely good (64%) on the scale of understanding their achievement and next steps in writing



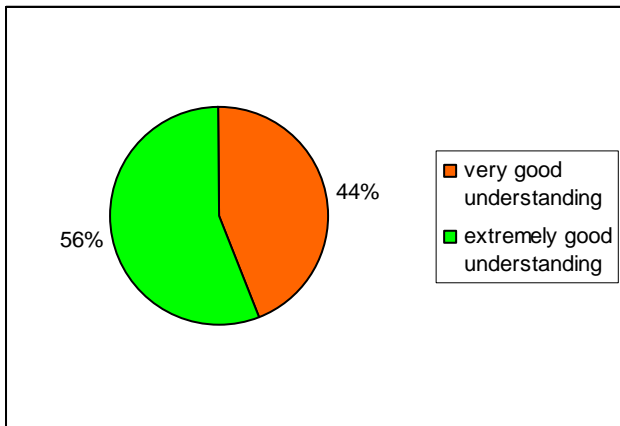
Q6. Student understanding of achievement and next steps in mathematics

All students rated themselves from okay (4%) to extremely good (60%) on the scale of understanding their achievement and next steps in maths



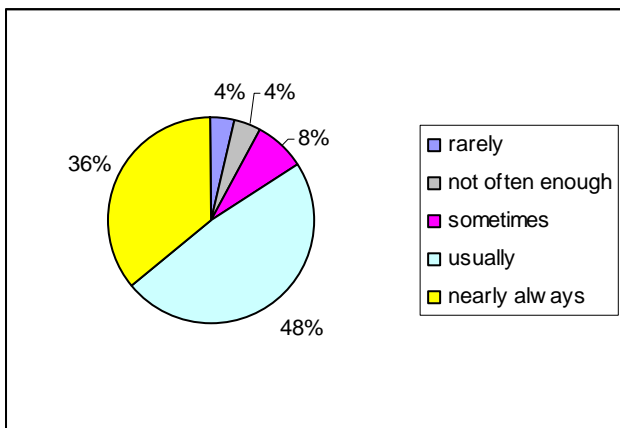
Q7. Student understanding of achievement and next steps in inquiry studies

All students rated themselves as very good (44%) to extremely good (56%) on the scale of understanding their achievement and next steps in inquiry learning



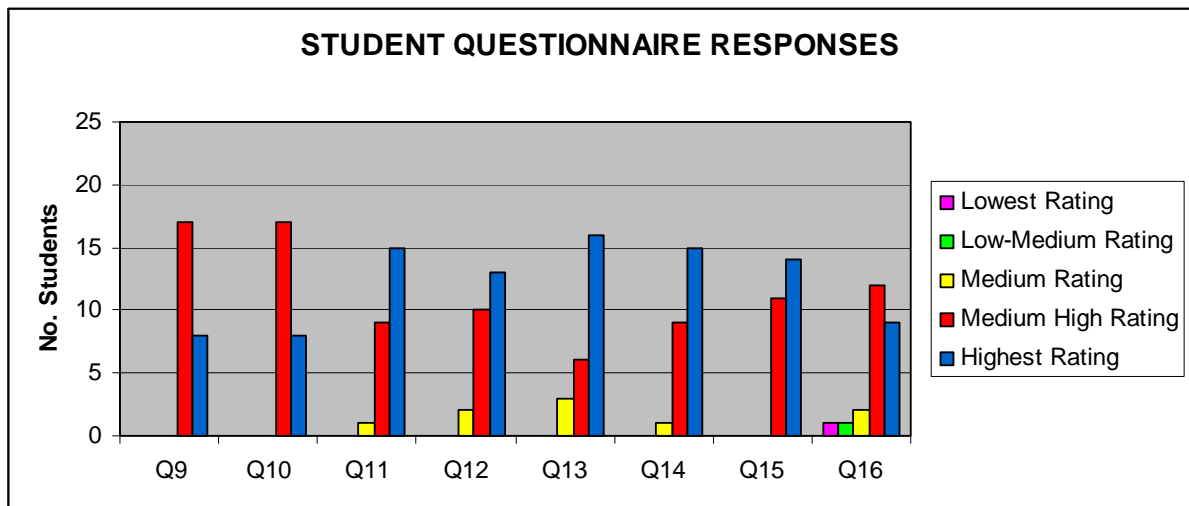
Q8. Student perceptions of work being at the right level in reading

Student perceptions of how well the work they were doing in reading was at the right level for them used the whole range of very rarely (4%) at the right level to nearly always (36%) at the right level.



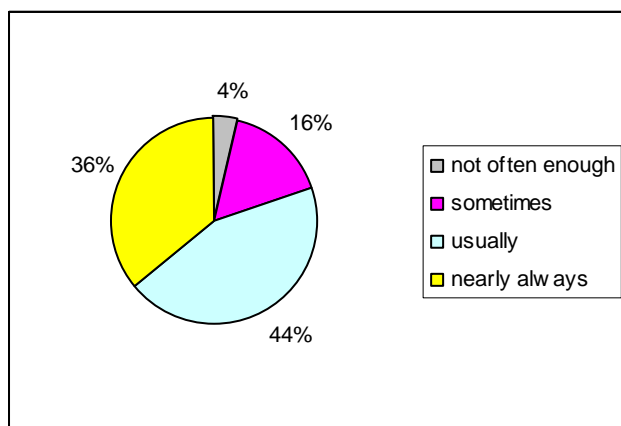
Student perceptions of their work and level

Figure 4 (Questions 9 to 16)



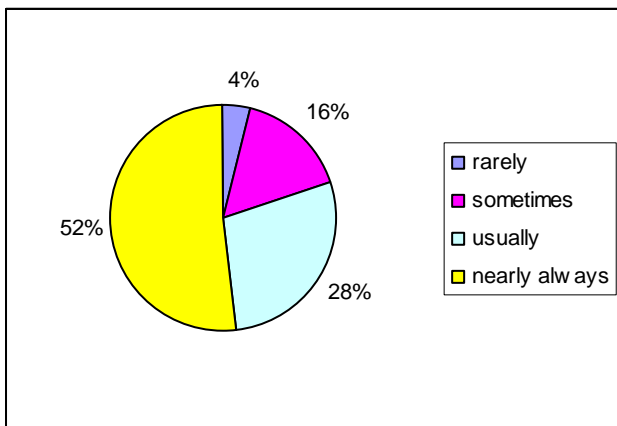
Q9. Student perceptions of work being at the right level in writing

Student perceptions of how well the work they were doing in writing was at the right level for them used the range of not at the right level much (4%) to nearly always at the right level. (36%)



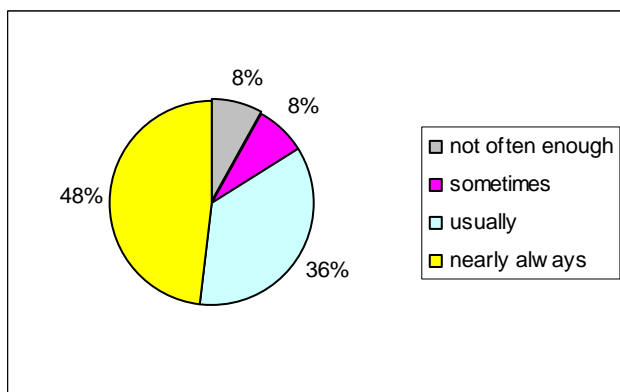
Q10. Student perceptions of work being at the right level in mathematics

Student perceptions of how well the work they were doing in maths was at the right level for them used the whole range of very rarely (4%) at the right level to nearly always (52%) at the right level. 80% overall chose usually or nearly always.



Q11. Student perceptions of work being at the right level in inquiry studies

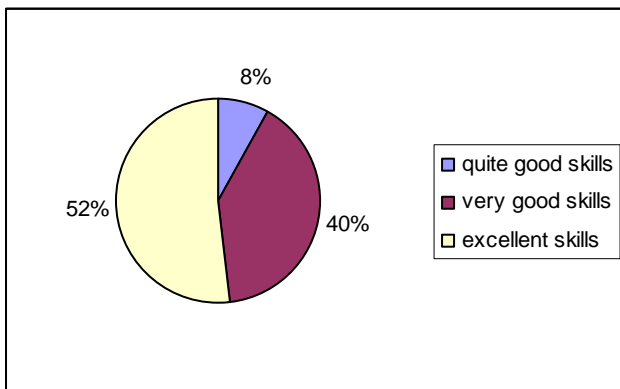
Student perceptions of how well the work they were doing in inquiry was at the right level for them. They used the range of not at the right level often enough (8%) to nearly always (48%) at the right



level.

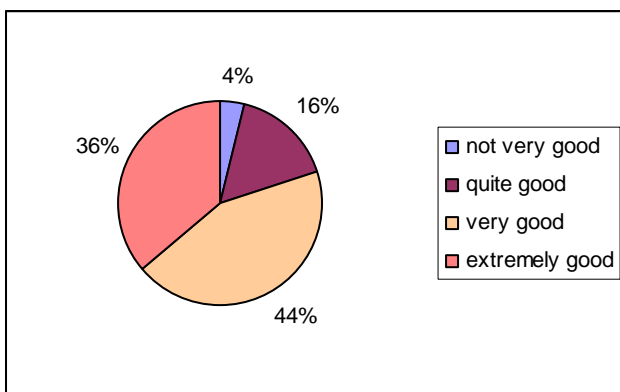
Q12. Students rating of their skills to work in groups

Students rated themselves from quite good skills to work independently without the teacher (8%) to extremely good skills (52%). 82% thought they had very or extremely good skills



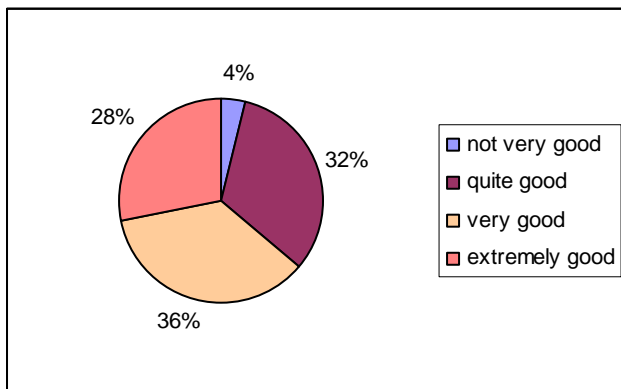
Q13. Students rating of the ability of the class to work groups

Students rated the ability of the class as a whole to work successfully in groups and to support each other's learning from not very good (4%) to extremely good (36%). 80% rated their classmates in the top two categories.



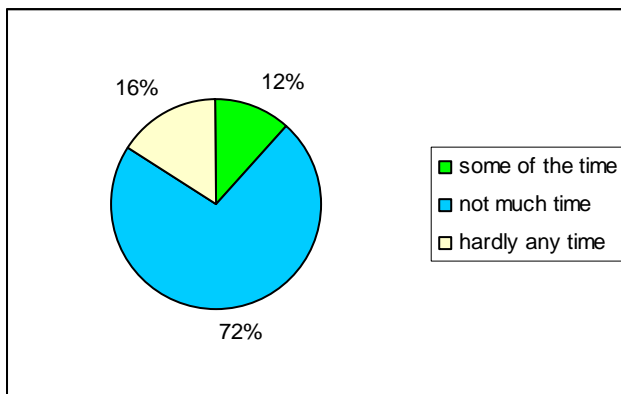
Q14. Student rating of the ability of the class to work independently

Students rated the ability of the class to work successfully independently from not very good (4%) to extremely good (28%). 64% thought the class was very good or extremely good at independent work.



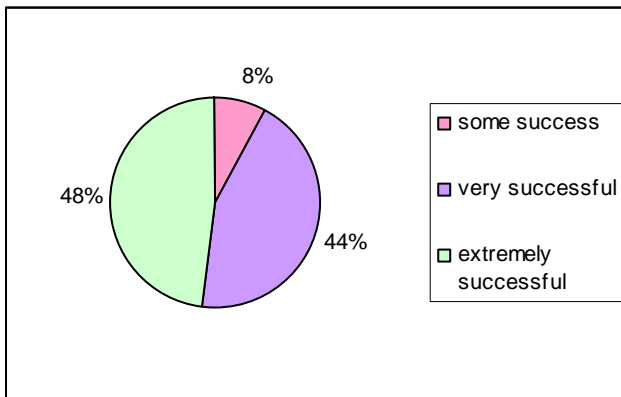
Q15. Student rating of the amount of time they spend off task

Students rated the amount of time they spend off task from some of time (12%) to hardly any time (16%). 88% felt they were on task nearly all or most of the time.



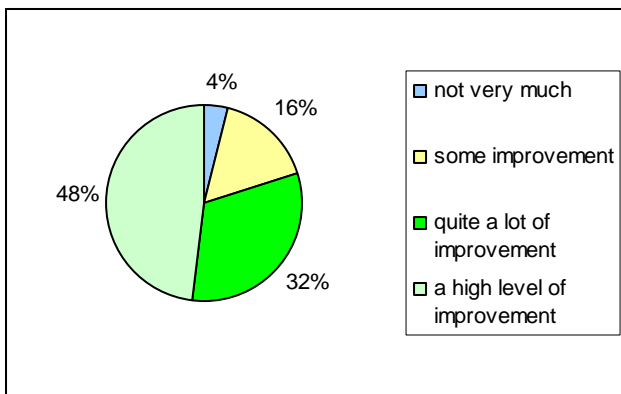
Q16. Students rating of their ability to manage their own learning

Students rated how successful they felt at managing their own learning from having some feelings of success (8%) to feeling extremely successful (48%)



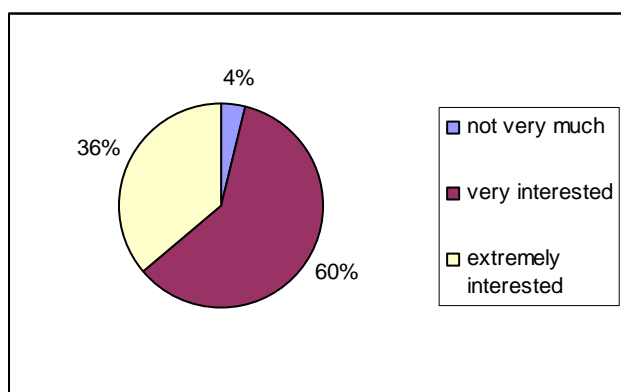
Q17. Student rating of their level of improvement

Students rated themselves to experiencing not very much (4%) to a great amount of improvement (48%) in their school work this year. 80% felt they were improving quite a lot to a lot.



Q18. Level of interest students have in their learning

Students' ratings of their interest in their learning overall ranged from not much interest (4%) to a very high level of interest (60%). 96% i.e. all except one were very or extremely interested in their work.



Discussion of questionnaire findings

There was no guarantee that the focus groups of students who were interviewed and responded to the questionnaire were a representative group from each class. However, the results are still of some value in indicating students' perspectives on aspects of their learning and progress, and the ability of their class as a whole to work well independently and in groups.

All the students considered themselves to be very good or excellent learners who had very good or excellent understandings of their own learning strengths and areas for development. Nearly all but one or two of the students believed they had a very good or extremely good understanding of their achievement and next steps in reading, writing, mathematics and inquiry learning.

Questions eight to eleven were designed to gauge, from the students' point of view, the extent to which teachers were matching the curriculum to the perceived learning needs of their students. This question was described to the students, by the researcher, as the work 'having the necessary challenge but not being too hard.'

The results show that eighty percent or more of the students felt that in the areas of reading, writing, mathematics and inquiry studies, the work was usually or nearly always at the right level for them. We discussed, in each group, any perception the students had about the work not being well matched to their learning needs. At School B, there was a discussion about the top mathematics group not always moving at sufficient pace for the abilities of the students in the group. At School C, one student felt he was an adult reader with a reading age of fourteen so he had decided that no children's books would be suitable. However, he was later able to explain that his next step in reading was 'learning to skim and scan for

information' and he felt this was a suitable goal. Therefore it was assumed that he was receiving reading that was helping him improve.

More than eighty percent of the students believed they had very good or excellent skills to work in a group and support each other's learning without their teacher's help. They also rated their classmates in the very good to extremely good categories. Results were a little less positive for the students' rating of their class as a whole to work successfully independently. Sixty-four percent put their classmates in the very good to extremely good range. School A had five students who rated their classmates at the middle category of 'quite good.' Their reservations lay around students in one group in their class who did not take their learning seriously and did not, in their opinion have the necessary skills to work independently.

Eighty percent of the students believed they were on task most or nearly all of the time with some saying they had a tendency to chat and get off the topic from time to time. This fits with the students' descriptions of their classes as being very social environments. Nearly all the students felt very or extremely successful at managing their own learning with eighty percent believing they were improving in their school work a lot or to a high level. All students, except for one, were very or extremely interested in their work.

Teacher to Student Findings

Overview

This section reports the findings of the results from the vertical analysis. (See Figure 1) It discusses the links between what the teachers said and what the students in their classes said under two headings. First, there is a discussion of the teacher and student beliefs and understandings about assessment. Second, links are made between teacher and student descriptions of their classrooms. The results of the student interviews and the questionnaire results are both used to inform the analysis.

Links between Teachers' and Students' Beliefs and Understandings

School A

Jane, at School A, explained the most important aspect of assessment was that students knew what they needed to know for their learning. She considered that questioning was a very important teacher skill and this skill may have been interpreted by the students as being that a good teacher will actually try to figure out what you are trying to do. Good questioning was highly relevant to this process. Jane explained assessing as 'actually just next step learning.' This must have been well emphasised in her classroom practices as her students

were all able to give good examples of their next steps and goals during the interview. The individual school questionnaire results (See appendix J) indicated that all the students in the focus group at School A rated themselves as very good or extremely good learners with a very good knowledge of the learning process and of their learning strengths and areas for development. In reading, writing, mathematics and inquiry studies they felt they had good to very good understandings of their achievement and next steps although three students felt they had only an okay understandings of writing. Jane's intention to help students know what they needed to know for their learning and next steps appeared to be very successful.

Jane saw one strength of her assessment practices as being that she had a good understanding of where the students were at in their ongoing learning. The students confirmed this to be the case when they discussed the use of the continuums they placed themselves on to reflect their achievement. They explained that the teacher took a more in-depth look at their tests and other assessments to make her decision about the level they were at. They said that they discussed this with her and decided together on appropriate next learning steps. The students all thought they were improving at an okay to very good rate so it appears that their next steps were generally well worked out to meet their needs.

Jane explained that she thought school wide data could be used effectively to inform learning at classroom level. The students talked about how they looked at their test results and designed next steps from them. The students were very affirming about their work being at the right level for them with all but one saying the work they did was usually or nearly always at the right level and challenging enough in all subject areas.

The students felt reasonably successful about managing their own learning. They also believed they could work very well to extremely well in groups or without the teacher's help but had concerns about some of their classmates doing this. They believed they were mostly on task and very interested in their work.

School B

Debbie thought that the formative assessment practices she was using were helping all students manage their learning well. The students confirmed that they were learning to manage their own learning when they spoke about assessment as 'assessing your own self-development or seeing how much you have learned or are going to learn.' Questionnaire results (see appendix J) also verify that the students in the group all believed they were managing their learning very well or extremely well. Debbie thought the students got more support from the style of interaction that formative practices engender and that the students were very good at supporting each other's learning. The students confirmed that they were okay to very good at working in groups and they rated the whole class as being very to highly successful at working in groups and supporting each other's learning.

Debbie said that the information she collected from a variety of assessment practices helped her to focus on the various needs of the students and improve their individual work while she was teaching. The students noted that their teacher used assessment information for grouping students according to their learning needs. Their questionnaire results indicated that five out of seven of them thought the work they did was usually or nearly always at the right level of challenge for them. There was just an issue about extending students in the top mathematics group to their full potential. In the eyes of the focus group then, Debbie was generally very successful at tailoring the work to the correct level through the use of assessment information.

All the students were able to talk knowledgeably about their next learning steps that they saw as worthwhile. The questionnaire results confirmed that all the students perceived they had a very good to excellent knowledge of the learning process, and their learning strengths and areas for development across all curriculum areas.

School C

Suzanne considered formative assessment to be about adjusting teaching to improve learning. Questionnaire results (See appendix J) showed that all five of the students in the focus group perceived that the work they did had the right level of challenge in reading, writing, mathematics and topic studies.

Suzanne also contended that formative assessment empowered and motivated learners. The student interview indicated that students understood that they could assess themselves to see how well they had done. Questionnaire results confirm that all the students believed they were very or highly successful at managing their own learning, they were very or highly interested in their work, and they rated themselves to be nearly always on task and highly successful at working independently or in groups. All the students rated themselves as very good to highly successful learners with a very good knowledge of the learning process. This suggests strongly that these students were feeling empowered.

Suzanne felt that goal setting was going particularly well and discussed a sense of excitement in children as they talked about their goals and reflected on them all the time. She said it was making them aware of their own learning. The children talked about goal setting as making it easier for them to learn and for the teacher to know what she needed to teach them. They were able to talk specifically about their goals in various curriculum areas. They did this with considerable enthusiasm. The questionnaire results also showed that all the students felt they had a very or extremely good understanding of their achievement and next steps in reading, writing, mathematics and topic studies.

School D

Through the formative practices they were using, Gina believed that the students were developing new language skills that enabled them to communicate with others, manage their time, be reflective and set goals. The students accordingly used the language of assessment very competently as they discussed assessment. For example, one student commented that assessment was ‘their teacher and themselves thinking about their learning, what they could do and what they needed to do next.’

Gina explained the most important reason to assess was to support student learning. She considered the key factors were meeting student needs, planning and teaching to these needs and motivating students. She believed that students were becoming increasingly aware of where they were at, and where they wanted to be and how to get there. Questionnaire results (See appendix J) indicated that all of the students in the focus group considered themselves to be very good or excellent learners with a very good knowledge of the learning process and their own learning strengths and areas for development. They all rated themselves as having a very or extremely good understanding of their achievement and next steps in reading, writing, mathematics and inquiry studies. They were also able to talk about their next learning steps in the language of assessment that Gina talks about.

As far as Gina’s intention to meet students’ learning needs went, the students all thought the work they were doing was nearly always or always at the right level for them, and had appropriate challenge in reading, writing, mathematics and inquiry studies. The interview showed they had very clear understandings of what they were learning and what they needed to be able to do to achieve the intention of the learning. They talked about goal setting being taken seriously and that they found this motivating.

The students saw themselves and their classmates as having very good or excellent group and independent work skills. Interestingly, they rated themselves as being only okay or reasonably good at staying on task. They qualified this during the interview as being because of the high quality of the friendly relationships they had with each other and the social nature of their classroom.

Teacher and Student Descriptions of their Classrooms

School A

Jane talked about the use of learning continuums as being a powerful influence on classroom relationships and interactions because students understood that they could move on but that learning never stops. She thought this had helped to break down a ‘tall poppy syndrome’ and that students just accepted each other for what they were. There was less labelling and the students worked with each other cooperatively and in flexible groupings.

Students knew their learning needs. Students confirmed this by discussing how people 'just kind of worked together' and that students explained tasks to each other and supported each other's learning.

They talked about the level of choice they had and were able to discuss their learning needs articulately in terms of their goals and next learning steps. The students considered that they were able to be more social with their teacher and that their teacher was more friendly to them. They said they knew their teacher's weak spots and that their teacher had become more human. Such comments confirmed the level of power sharing that Jane was trying to engender in her classroom interactions with students.

School B

Debbie talked about the balance between student input and her guidance. She interacted all day with students and tried to get them to think for themselves without needing her approval. The students talked about how their teacher treats them as though they are older and asks more complex questions. They liked this and felt they were treated as mature people. Debbie believed in everyone treating each other with respect and that there should be openness and fairness. Students were not to put each other down. Students confirmed that they got on well and that they learned a lot off each other which was achieving Debbie's goal of not needing the teacher's approval. The students valued each other's abilities and perspectives. They mentioned that another student's different opinion could change theirs. They talked about 'openness' in their relationships in comments such as, 'There is no awkwardness. We talk openly about our thinking.' They liked the level of choice they are given. They discussed their interactions with their teacher as being about what they could do to get better and about how they were feeling about their work. Such comments reflected the respectful relationships that existed but also the sharing of power that was occurring.

School C

Suzanne was aiming to have a classroom culture where children were more responsible for their own learning. She was increasingly 'releasing control' and she was able to leave the classroom without students saying that they did not know what to do. The children confirmed that they had come a long way in working better in groups and learning more. Their class goal was 'partnership' and they were aware of the need to practise the skills of the school PRIDE motto. One boy explained that he used to be silly but now he was good.

School D

Gina believed she did not hold the power. The students said that they got to choose about eighty percent of what they did and when they did it. This suggested considerable letting go of the traditional teaching approach where the teachers decided what was to be done and

when. Students planned their own timetables and liked the fact that they were able to work at their own pace and come back to things. Gina explained that she did a lot of spontaneous, on-the-spot teaching. As soon as a student had a question or a problem, she addressed it right then and there. The students confirmed that their teacher was always there when you needed her. 'You didn't have to wait. She would explain and teach 'then and there.' The set up of the class as a learning centre and the fact that students could move furniture to suit their current learning needs indicated the power sharing that was occurring between the teacher and students.

Discussion of teacher/student beliefs

As the teachers had all emphasised, they considered the two main purposes of assessment were for children to understand their learning and for the teacher to use the information for planning so that programmes were well focused on students' learning needs.

There was a good correlation between the teachers' intentions with their assessment practices and the students' reports about what happened in their classrooms and what they knew about their learning through assessment. Nearly all the students were showing positive attitudes to learning and believed that they were achieving and progressing well. They felt the work they did was generally well tailored to meeting their needs and that it usually provided suitable challenge. They had good understandings of the learning and assessment process and had a clear sense of purpose, enjoyment and interest in their school work. Students felt empowered, involved and respected for their capabilities. They were responding positively.

The competitiveness and pecking order of the traditional classroom appeared to have dissipated. The only student who mentioned competition with other students was a student at School B who said he enjoyed trying to achieve at a higher level on rubric charts than his friends. It did not appear that competitiveness had been actively discouraged but that students were more aware of the learning journey that they were all on. They were learning to provide each other with appropriate support and feedback and because they often worked in groups, the emphasis was not always on individual achievement.

In the focus groups at least, assuming that a range of natural abilities exists among the individuals who were interviewed, all students were feeling a high level of success and progress. This suggested that students who had traditionally felt a sense of failure because of constant comparisons with more able peers were able to use the reference points provided by transparent, progressive criteria to measure their own progress and success. Instead of being overwhelmed by feelings of inadequacy they were able to move at their own pace. The work provided was more likely to be suited to their individual needs.

The degree to which the student groups were able to articulate their understandings in the language of 'learning and assessment' was interesting. Their teachers were clearly communicating very well with them to help them develop and use this vocabulary. What appeared to be developing was an 'awareness about learning.' Instead of being assumed, the process of learning was being spoken. It was brought to the conscious level by the language that was used in the classroom interactions.

A parallel could be seen between this and the blue DeBono thinking hat labelled 'thinking about thinking.' Teachers think about their thinking when they reflect on their classroom practice. Similarly, the case study students are 'learning about learning.' They are learning to reflect on their learning. The teachers, through a variety of inclusive, empowering assessment techniques, are helping them develop a platform of skills for doing this.

5. Discussion

This study, in a small way, brings us up to date with the ways in which four New Zealand primary teachers in 2008 are thinking about and make sense of assessment practices. The results cannot be generalised to the entire population of primary teachers because they are context based in particular schools and because the teachers who were selected for the study are not typical of all teachers. The teachers and schools were exemplary. The classroom assessment practices the teachers were using during the researcher's observation of their classes during ERO reviews appeared to be working very well for the students and the teachers. This study confirms this observation.

Each one of these teachers was an example of what highly reflective, capable and experienced teachers, who have undertaken extensive professional development, might be thinking about assessment and what they might be doing in their classrooms as they implement their new learning.

If we accept that transferring new learning theory into classroom practice is a complex and difficult process, it seemed pertinent to study examples where the teachers appeared to be successfully implementing the practices that were aligned with current learning theory. The practices of these teachers may, in some way, provide other teachers with affirmation of the best parts of their teaching as well as ideas for moving forward with their own practices.

Similarly, the schools were not necessarily typical of all New Zealand primary schools. These schools have worked particularly hard to develop professional learning cultures that both support and challenge teachers to improve their practice. They were schools that had developed processes and lines of communication that helped disseminate new theories of learning among teachers and helped them to apply these new theories to their practice in ways that were sustainable.

Some of these practices included the whole staff undertaking readings and associated professional discussions and using the internal expertise of the staff and senior managers to lead curriculum reviews and help make improvements. Syndicate teams moderated students' work together and discussed the implementation of new practices. Cross level teams compared and discussed practices and the formation of groups of teachers with common interests. They led the development of various areas such as assessment. However, the way in which such practices were carried out have been developed differently in each school.

In this way, these case studies were highly situational but provided rich information about how teaching, learning and associated assessment practices have moved on since the previous studies of Dixon (1998), Hill, J (1999) and Hill, M (2000). There has been little research since this time in New Zealand about how teachers have developed their understandings and interpretation of assessment, the problems they face, what they actually do in their classrooms and what they use assessment for. Even less literature involves the perceptions of students about their experience of assessment.

Hill, J. (ibid) concluded that much professional development was required to help teachers translate contemporary assessment theory and policies into their classrooms. Since her study, professional development has occurred in most schools in the form of extended, whole-staff contracts that have been on offer to primary schools since 2000. The schools in this study have all be involved in at least two of these contracts. They continue to seek advisory support to meet the needs of their school and they have internal PD programmes and processes that ensure ongoing reflection, review and improvement of their developing practices.

Dixon (ibid) considered that some of the practices and structures that inhibit or enhance teaching and learning needed to be identified so that formative rather than summative activities could become the primary focus for teachers. The power of formative assessment practices to engage students to help them feel successful and to empower them as learners has been well discussed in the literature review. The case study teachers and their schools have identified some of these practices and either discarded or adapted them. For example they talked about the collection of PAT test results that were not analysed and the filling out of school record cards that were not used.

While the teachers in Dixon's (ibid) study agreed with the philosophy of using assessment to promote student learning, they could not explain how they used assessment for this purpose. They did not have a well developed understanding of formative assessment and actually spent their time focusing on summative assessment.

The results of this study suggest that in the professional careers of these teachers six to eight years ago, they would be doing the same things as Dixon's teachers. All four of them talked about carrying out unhelpful practices such as the ones identified above.

Hill (2000) found teachers to be stressed and confused about assessment and considered that developing formative assessment practices in New Zealand classrooms was the critical factor in raising standards and promoting learning.

The teachers in this study may well be stressed but their comments indicated they have coherent and well informed views about assessment. Their stories show some dramatic shifts in the understandings and beliefs that they had about assessment, the learning cultures they sought to establish, the relationships between teachers and students, the interactions that occurred, the classroom practices they implemented and the organisational structure of their classrooms.

There has been a remarkable repositioning of the place of assessment in the schools in which these teachers work and in the practice of these teachers over six to eight years. Of the three main purposes of assessment discussed in the introduction, the teachers in this study were convinced that assessment for learning and for improving learning was without doubt the most important purpose of assessment. It was what they talked about first and it was what they wanted to discuss, explain and focus on during the interview. They were enthusiastic about the changes they had made and the impact these changes were having on the motivation, attitudes and, subsequently, the learning of the children in their classes.

It was actually necessary to prompt the teachers to get them to discuss the other recognised purposes of assessment. They acknowledged the need to report on students' learning but the practices they were using meant this was happening quite differently now to traditional forms of reporting. Portfolios or key pieces of student work were the main vehicle for sharing students' achievements and progress with parents. The portfolios, in the three schools that used them, had been carefully developed to make the samples useful and relevant. However, they had all been developed quite differently and in ways that were unique to the school. Each school used portfolios in different ways and at different times. The students had different roles in their use.

In all four schools students took part in and increasingly led the learning conferences that were held with their parents. They spoke about and explained their learning, their goals and their next steps. These three way conferences were in the fledgling stages in the schools. The teachers all acknowledged there were improvements to be made. However, the change that has occurred in all was the repositioning of students as capable partners in understanding their own learning process.

The teachers accepted that there is an accountability function of assessment but hardly touched on this in the interviews. In the four schools, there had been a noticeable trend towards the use of the new assessment tools to collect school-wide information for this purpose. The development of data bases for the storing information had accompanied this trend.

However summative assessments in the form of teacher designed, knowledge based tests had all but disappeared. Gina did not consider summative assessment to be part of her repertoire. Debbie reported the greatest use of summative assessments of the four teachers but generally these assessments were based on the learning processes rather than testing students' actual knowledge. An example was tracking student success against the criteria on a rubric about being able to follow the inquiry learning process. It appeared then that, while teachers still planned with achievement objectives in mind, they did not try to track whether students had achieved each one. This also was a practice from the past that inhibited teaching and learning and, as Dixon suggested needed to be identified.

This dropping off of the summative assessments, that were found to be the form of assessment with the highest priority for teachers in prior studies, called into consideration the claim by Pryor and Croussand (2008) that summative assessment is still one of the most powerful, institutionalised discourses. This is because it creates marks and reports and qualifications that reify aspects of self in ways that can become self confirming. There have always been the winners and the losers in this type of assessment. If summative assessment of this type has virtually disappeared, it creates an opportunity to consider what has taken its place and how this might be impacting on students' identity as a learner.

The substitute for summative assessment in these classes could be seen to be the practice of self, peer and teacher assessments on the basis of criteria that had been agreed on by the teacher and the students. These assessments were often based on rubrics that showed progressive criteria for each desired outcome. Students knew the criteria prior to beginning the learning. They used the criteria as a guide during the learning and assessed their work against these criteria after the unit. The teachers co-graded the students and this led to discussions about what the students, as individuals in a group, needed to learn next.

It could be interpreted that teachers were actually using the students' current positions against the criteria of any given rubric as a summative assessment because they could determine what each student was achieving at any point in time. However, it was also formative in that the next step was evident to both the student and the teacher.

The caution here is the quality of the rubric and the progressions that are included. If the progressions are an exercise in semantics, the criteria may well not point out a worthwhile next learning step. Learning, after all, does not occur neatly in incremental steps. There is

an inherent danger in criteria being used too prescriptively. As the student focuses on the given criteria, certain other aspects of learning could take the back seat and not be named. Some aspects of writing, for example, just cannot be broken down into a set of criteria. Creativity and flair, for example, cannot always be named. They could be overlooked as a naturally occurring ability in some students, who instead become consumed with ensuring they do things such as 'use three adjectives in their work to describe a scene.' This is a concern that needs further consideration.

The accountability function of assessment is being met in a different way to the summative testing of the past. The teachers tested students, using the assessment tools that the school had chosen and they sent this information to the managers to collate, analyse and interpret. The teachers all mentioned that such information had been collected in the past but was not used. Now it was used. All of the schools used the information collected, to a greater or lesser degree, to develop school targets, or team targets, to identify individuals who required support or extension or in some cases to identify trends in students' learning.

In addition to this, the teachers also used the information from these standardised tests at classroom level. They identified common gaps in students' understandings and designed their programmes to meet these gaps. They used the information to group students and two of the teachers mentioned that they shared the results with the students, on an individual level, so that they could be aware of their achievement levels and next steps.

This finding challenges the educationalists who have considered there are clear distinctions between the types of assessment and who believe that the same assessment cannot be used for different purposes. A fluidity has developed in the teachers' understandings and application of assessment. They did not view assessment within rigid, separate boundaries created by definitions. This dispels a lot of the debates about the various types of assessment and how and why they are in conflict with each other.

For example, it counters the position of researchers such as Neyland (ibid) who contended that the tension between assessment for accountability and assessment for learning will always cause pressure for teachers because of the competing discourses they represent. His comment that even what is considered 'good' assessment can never escape the unpleasant odour of accountability is challenged by this new positioning. It appears that a solution has been achieved, at least in these schools and in the eyes of these teachers. The evidence that they gathered was used to inform school-wide, classroom and reporting requirements. It was also used for diagnostic, formative and summative purposes. This was an economical use of the same data. The teachers appeared to be comfortable with using assessment in this way. The involvement of students in the process by involving them in using the results to understand their achievements, in plotting next steps for learning, and in

students reporting their learning to parents merged the two opposing assessment forms into a purposeful relationship.

Also confirming the strength of this relationship is that all four teachers were adamant that they would not undertake any assessment that didn't have a purpose. This is a definite advancement on the past when teachers were confused about assessment and fell into a pattern of 'doing as they were told even if it was at variance with their beliefs. These teachers were taking a proactive stance in relation to any expectation to do assessment for assessment's sake. This could well be because of the more critical cultures that had developed in their schools. The case study teachers had been encouraged to question the status quo and had developed the understandings to justify their position on any assessment issue. These teachers were not confused about assessment. They were articulate, well reasoned and very clear about the purposes of each assessment they undertook and how each assessment would be used to the advantage of the students.

Elley (2004) spoke of teachers being overloaded with excessive amounts of assessment with little purpose. He believed that teacher morale had been affected by the worthlessness of this exercise. Did these teachers still feel overloaded? Debbie mentioned a degree of stress but this was because she found everything she did worthwhile and couldn't decide on any assessment practice she would drop off. Suzanne mentioned the stress of her managerial responsibilities on top of her teaching load. She wanted to concentrate on her classroom practice because it was exciting and rewarding and she was convinced that her new approaches were working extremely well for students. However she found her classroom assessment programme and approaches to be 'easy' and definitely 'manageable.'

Hill, J(1998) found that many teachers in the 1990s assessed in an ad hoc way. There was no suggestion of this with these teachers. Each of them had developed a personalised system of classroom assessment that they saw as workable and useful. They could all articulate the reason for each practice and explain how it looked in practice and how it benefited their teaching and students' learning.

An interesting aside to the main part of this discussion is that of Hill's (2000) criticism of ERO for emphasising the managerial role in schools of analysing achievement information in its reports and not recommending the adoption of formative practices to improve student achievement. The most recent ERO reports for each of these schools show that ERO has also moved to support the adoption of assessment for learning. Each of the reports of these four schools include reference to such areas of good performance as teachers using strategies that help students take responsibility for their own learning, the assessment of the processes of learning, students understanding their own learning strengths and areas of development and the adoption of student led conferences. Areas for improvement in the

case study school reports have recommended such developments as rationalising assessment practice so that only assessment information that is useful is collected.

Assessment requires a high level of critical judgement. Brown (2002) was accurate in his finding that teachers' perceptions of assessment are complex, multidimensional and interrelated. Many factors are involved; knowledge of pedagogy and children's learning, classroom dynamics, observational skill, organisation and effective systems. Much reflective capacity is required to implement assessment practices successfully into the complex and every changing relationships that exist in any classroom.

As Chappius and Chappuis (2008) point out, assessment is an ongoing, dynamic process. The assessment practice of the case study teachers confirmed this dynamic relationship. The teachers saw the connection between assessment and teaching as interactive and circular. Each informed the other. They were in a 'dynamic' relationship. In the same way, the teachers positioned themselves to be in a dynamic relationship with the various purposes of assessment and the needs of the students they teach. Choices are made at every step of the assessment process based on any given situation. Certainly, Neyland's (2007) contention that, in the 1980s, 'assessment was carved off teaching' is no longer substantiated.

The examples of formative assessment that the teachers talked about using in their classrooms helps solve the research dilemma about what assessment practices teachers considered to be formative. While a definitive list of all their classroom practices was not asked for, the teachers mentioned the use of feedback, rubrics, goal setting, teachers/student conferences, group reflection times, sharing of learning intentions and success criteria, and self and peer assessment as aspects of formative assessment.

This brings us to a consideration of the issue that, while the teachers commonly use these terms above to describe their practices, the way in which they used and developed systems around these 'labelled' forms was different from class to class. They have found highly individual ways of implementing these practices and altering them to suit the dynamics of the classroom. Their own personal interpretation and creativity came into play as they decided on and adapted what would work over time. A new practice Gina had developed for example, was giving students the opportunity to re-present after they had had feedback about their first effort. In other words, a timely opportunity was offered to address the areas upon which they could improve.

What is also clear was that the way in which teachers interpreted various formative practices, and the way they familiarised students with them and developed their use in their classrooms was highly individual. More importantly, the way they 'enacted' the processes of assessment was crucial to their successful use and the acceptance of the students. This

confirms Nuthall's (2000) belief that methods per se do not exist. They are always interpreted by the teacher and implemented in a unique context. Teachers do in fact 'reshape strategies.'

Carless (2007) contends that formative assessment is actually about social interactions. This is an interesting viewpoint and one worth considering further in light of the above. The teacher communicates the assessment to students through the language of assessment and feedback and through the processes, systems, written examples and interactions that occur. Kreisberg (ibid) talks about the opportunity to create teacher/student relationships based on power with students as opposed to power over students.

The extent to which the teacher is able to communicate on a 'power with' level as opposed to a 'power over' position is crucial to the relationships that develop. Much of what teachers say and do is based on their own assumptions about classroom rituals. These assumptions are difficult to shift. Each teacher needs to have made a real shift in his or her thinking to be able to communicate in ways that are authentic and true to a socio-cultural perspective of classroom interactions. Otherwise, they subconsciously create confusion for students as they attempt to carry out formative socio-cultural assessment practices with an underpinning personal assumption of 'power over' students.

It is, in the words of Taylor (1997), about reconstructing the social norms of the classroom. The teachers in this study seemed to have had a great deal of success in this reconstructive process. We will look at the perspective of the students in the study for their interpretation of their classroom experiences. As Brown (2002) points out, few studies have included a comparison of the individual teacher's perceptions of assessment practices and the resulting classroom culture with the student's perceptions.

What the Student Interviews Identified

The four teachers in this study have managed to incorporate Black and Wiliam's five key factors for improving learning through assessment successfully. They used feedback, the active involvement of students in their own learning and the process of adjusting teaching on the basis of assessment information. They helped students understand how to improve and, without a doubt, realised the profound influence that assessment had on the motivation and self-esteem of students. This was demonstrated by the articulate students in the focus groups who showed informed understandings of assessment for learning and made some insightful comments about teachers and classroom relationships and interactions.

The information collected from students suggests that in these classrooms, teachers had achieved the break with traditional cultural routines that Nuthall (2000) considered were so difficult to shift. New ways of interacting and behaving were creating classroom cultures that created the climate of support and encouragement that Nuthall believed was possible. The

students reported that group processes and student to student relationships were supportive and encouraging and that they could all learn from each other. There was a great deal of evidence from the students indicating the relationships with their teachers were based on a 'power with' mentality and that their teachers were coming from a position of sharing power and empowering students to be partners in learning.

The students at School A and School D acknowledged that there had been an adjustment required. Doyle's (ibid) discussion suggests that students need a 'learning' as opposed to 'performance' orientation and require different skills and attitudes to adjust fully to such a classroom culture. It appeared that not all students had made this adjustment yet. This was demonstrated by the comments by the students in School D about the adjustment process and the small group of students at School A who seemed to be struggling with managing the freedom, the different structure and the level of choice involved.

The students at all the schools were able to talk about their learning as if it is just that; *their* learning. They owned it. They were confident and critically aware participants who were enjoying the level of responsibility, choice and ownership that their teachers were offering them.

6. Conclusion

The results of this study confirm that assessment does not exist in isolation or even as a discrete part of the teaching and learning process. It is played out as an integral part of the ongoing interactions and relationships that occur in classrooms.

The formative practices that teachers in this study have managed to establish in their classrooms are creating a climate in which students have every chance to develop and feel like confident, competent, knowledgeable learners. The possibilities for positive identity construction for all students is so much greater in such a climate.

What the case study teachers are achieving requires enormous skill and perseverance. As Black (ibid) explained, the teacher must find ways of incorporating the ideas of formative assessment into their classroom work and within the cultural norms and expectations of the community. The case study teachers have had many issues to contend with over the last six or so years. They have simultaneously changed their beliefs, their relationships with each other and students, the nature of their interactions and their expectations of the role of the student.

However, while none of these teachers would ever profess to having the formula right, they have developed the reflective and evaluative capacity to continue to develop, tweak and improve their practices for the benefit of the students they teach.

Limitations of the design of the study

The limitations of a qualitative study are outlined in the methodology. Quantitative methods were not to be appropriate to collect the type of data that was sought. However, the questionnaire did provide a quantitative aspect of the study. The likert item questionnaire was introduced to provide some directly comparative data between the different groups of students. In retrospect, the inclusion of a questionnaire for the teachers and assessment leaders may have been helpful; for example, to use a ratings scale to get teachers to grade the effectiveness of various aspects of assessment.

The clearest limitation of this study was the fact that there were no actual classroom observations were carried out to enrich and further substantiate the findings.

However, what has been shown is how quickly, given the right circumstances, the teachers, who care enough to be prepared to make such all encompassing changes to their practice, and the leaders, who are developing strong professional learning cultures that challenge and support teachers, can create a very different approach to assessment in a school.

Teachers appear to be establishing a workable relationship between the conflicting discourse between political mandates and the progression of learning theory. It is of great concern that there may well be political changes that require them to retrench. Unfortunately we can only watch as events develop. This researcher, for one, is hopeful that New Zealand primary teachers have found their collective voice. To hear teachers declare so resoundingly that they refuse to do any assessment that does not have a purpose is encouraging.

Further research

Of course, there are still many unanswered questions. If these classrooms were studied further and if the researcher actually spent time in the classes, there would be further interesting paths to follow.

A study of the teaching strategies used by the case study teachers including how they give feedback and use questions would provide information about how they interact with students.

The interactions of students that were not noticed by the teachers would give an insight into the changes that are likely to be occurring to the semi-private world of the students. A relevant extension of this would be a focus on the group of students at School A who were not as engaged in their learning as others.

Nuthall (2000) contends that people tend to equate motivation, engagement and interest with learning and this is not necessarily the case. He has shown that students are more likely to engage with work that they already know. It would be of interest to develop an understanding of the achievement and progress that occurs in the case study teachers' classes. It cannot be assumed that students are achieving at a higher level than they would be in a traditional class just because they are able to talk knowledgeably about their learning.

Little research has been carried out about how effectively the inquiry-based learning approach is being adopted by schools. Further studies in the classrooms of similar teachers to those in this study could shed light on how well the wider curriculum is being taught and assessed.

A comment of Gina's that students are learning to use the language of assessment and are developing better oral skills because of their participation in new classroom cultures presents an interesting research theme. This study shows that teachers and students have developed a new language of assessment. This language creates a medium for discussion and for the development of common understandings about learning. A study of the language used in similar classes would establish how the language of assessment is influencing and shaping the changing interactions that are occurring in schools and classrooms. These interactions appear to have dramatically influenced the learning process and the ways in which students and teachers engage in this process. It is an integral part of the reconstruction that is occurring in classrooms and schools throughout New Zealand.

Even more interestingly, it could well be that the new language is one of the most influential aspects in changing the culture of schools. What is happening for students in classrooms is also happening for teachers in schools. They are becoming learners with a new vehicle for expression. They are becoming more critical thinkers, more reflective practitioners and they are communicating their ideas in dialogue with each other using the new language that reflects the changes they are making. A study of this language could be an exciting addition to the quest towards understanding the evolving cultures of our primary schools.

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8. Appendices

Appendix A

Guiding Questions for Discussion with Assessment Leader

Assessment practices at the school

Changes to the school approach to assessment practices and understandings

1. Can you think back to and tell me about what assessment practices were like in this school at the time you arrived here.
2. Can you talk about the shifts that have happened in assessment practices in the school since you have been here?
3. What led to and drove these changes? Professional development etc.
4. During PD to what extent were teachers exposed to the research background behind the contracts they participated in?
5. Can you remember the source of any of the research or theoretical evidence the changes were based on?
6. What opportunities have teachers had to critically discuss assessment practices and changes that are made?
7. How convinced are you as a staff that the changes are benefitting students learning? Any differing opinions?

The professional context the teacher works in

8. How would you describe the professional culture of your school at the time you arrived here?
9. How would you describe the professional culture of the school now?
10. Can you describe for me what this professional culture looks like?
11. What processes exist in the school to support teachers to make and sustain changes to their assessment practices?

Changes to classroom practices

1. How successfully do you feel teachers in general have implemented their new learning from theory to practice?
2. How do you think changes to classroom assessment practices have changed how teachers teach?
3. How do students learn?
4. What aspects of changes to assessment practices do you consider are most advantageous to the learning process?
5. Do you think any group of students benefits more or less from the changes to classroom practices?

Future directions

1. What is the school currently working on in terms of developing, improving or sustaining assessment practices?
2. What needs to happen next and are there any plans as to how this might occur?

Appendix B

Guiding Questions for Discussion with Teachers

Firstly a chat about your teaching career, when and how you started and your journey to date. Significant moments? Low points? High points? Things that have influenced your practice.

Your Assessment Practices in the Classroom

1. Tell me about your classroom assessment practices? What are you proud of? What challenges are you facing?
2. Tell me about your assessment across all areas of the curriculum. Do you assess differently in different curriculum areas?
3. How do you make decisions about what to assess?
4. In what ways do you involve children in assessing? What do you think the benefits of this are? Are there any disadvantages?
5. What are the least useful assessment activities you do during the year? Why do you do them?
6. Which assessment activities do you value the most?
7. Which assessment activities would you like to use that you are not using at the moment? How could you make this happen?

Teacher's Knowledge about Assessment

8. Why is it important to assess?
9. There are many different ideas and definitions of formative and summative assessment. What are your understandings?
10. What would you see the purpose of each of these types of assessment as being?
11. What is the relationship between teaching and assessment?
12. Tell me about any professional reading about assessment you have done at your own initiative.

Assessment Practices at this School

13. Tell me about any recent professional development in assessment that has occurred in this school.
14. What processes does the school have to ensure high quality assessment practices?
15. Can you give me examples of how teachers in the school are working together to share assessment information.
16. What is going well in the school in terms of assessment practices? What do you think needs to happen next?

Changes to Teacher's Assessment Practices and Understandings over Time

17. What changes have you made to the ways you assess since you began teaching?
18. What/who helped you make such changes/ improvements to your practice?
19. How have the changes impacted on your teaching and the way you run your classroom?
20. Can you give me some examples of teaching strategies you use now that are an improvement on what you did in the past?
21. How has ICT impacted on your assessment practices and the way you record assessment?

Assessment in a dynamic classroom

22. If a classroom has an emphasis on assessment for learning what will it look like?
23. What will the teacher be doing and saying?
24. What will students be doing and saying?
25. What do you think the impact of such an emphasis is on students who are at risk?
26. Do you have any students you consider are unmotivated or have negative attitudes about their ability to learn? If so, can you describe what you think might be happening for these students?

Appendix C

Guiding Questions for Discussion with Students

Discuss my study with the students –to look at some of the changes that have occurred in assessment practices and how these changes are working for teachers and students

Why they are an important part of it and that each school will receive a copy of the finished study but no names will be used – not of schools, teachers or students

Get them to think up a name for themselves

Get the students to speak their chosen name into the recorder – discuss the need to speak up quite slowly and clearly

Students Knowledge about Teaching and Learning

What do you think assessment is and what examples can you give me? (Get them to talk about the factors they identify)

Tell me some of the ways your teacher helps you learn

What it is that makes a teacher a good teacher?

What it is that makes a learner a good learner?

What are the skills involved in working independently?

What are the skills involved in working with others?

What things happen in this classroom that help you understand what you are learning, why you are learning it and what you need to learn next?

Questions about the learning environment in this class

How would you describe this class? – discuss adjectives or verbs that might explain it to someone who hadn't been in it before?

What do you think makes this classroom these things they come up with?

What differences are there between learning in this classroom environment and that of other classes you have been in: (*students will be asked not to use the names of any teachers or other students.*)

Does your teacher do anything differently to other teachers you have had?

Have you changed your behaviour or attitude to learning at all this year? Discuss

What do students in this class do differently than in other classes you have been in? (If anything)

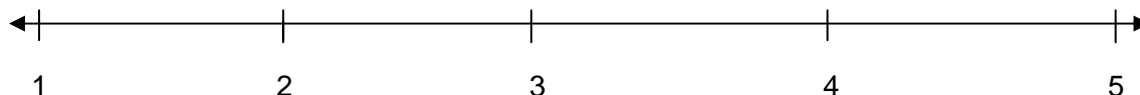
Appendix D

Student questionnaire

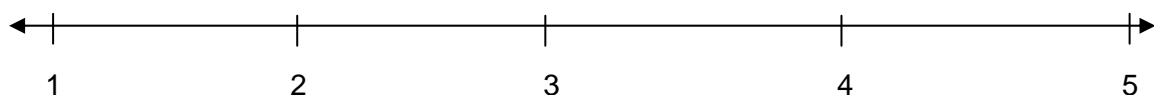
Name: _____ (remember to give a made up name)

Please rate the following on a scale of 1 to 5. One is the lowest rating and five is the highest. Lois will discuss each one with you and then you rate yourself.

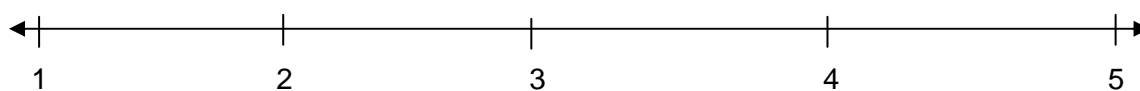
1. Your rating of yourself as a 'good' learner



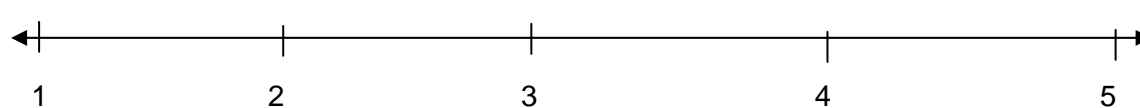
2. Your knowledge of the learning process – how you learn



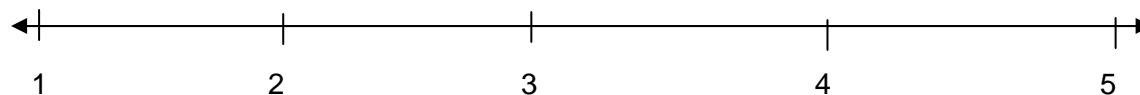
3. How well you understand your own learning strengths and areas for development



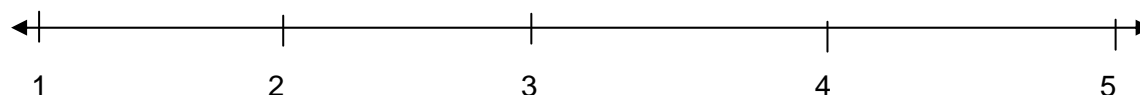
4. How well you understand your achievement and next steps in reading



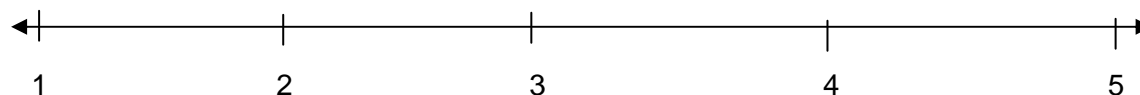
5. How well you understand your achievement and next steps in writing



6. How well you understand your achievement and next steps in maths

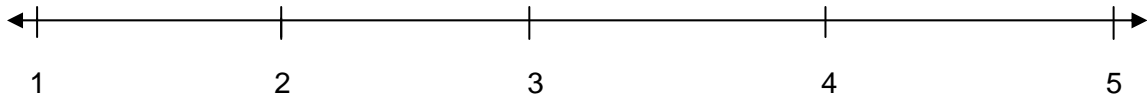


7. How well you understand your achievement and next steps in topic/inquiry

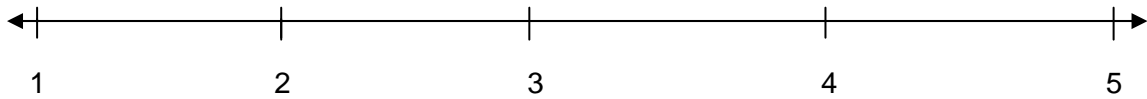


How closely you think the work you are doing is at the right level for you in:

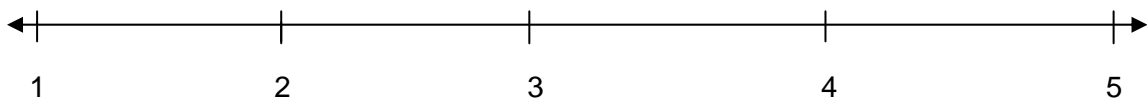
8. Reading



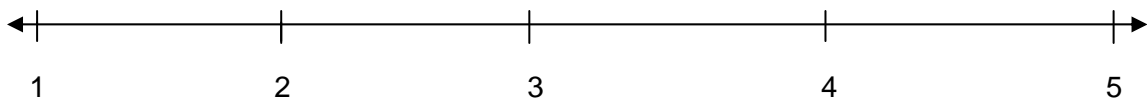
9. Writing



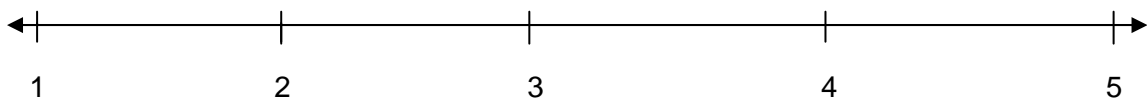
10. Maths



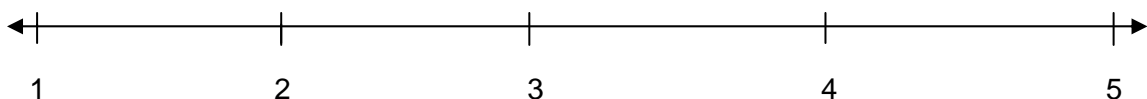
11. Topic/ Inquiry studies



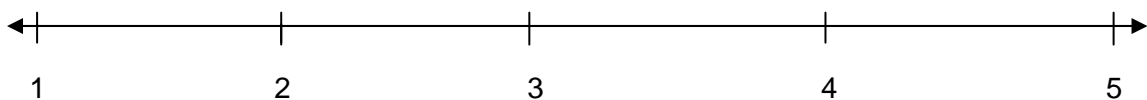
12. Your rating of the skills you have to work in a group without the teacher's help



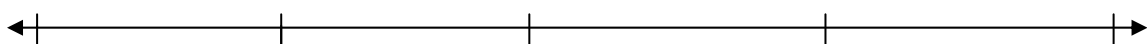
13. Your rating of the ability of the class as a whole to work successfully in groups and to support each other's learning



14. Your rating of the ability of the class to work successfully independently



15. The amount of time you spend off task in a day (1 equals a lot of time)



1

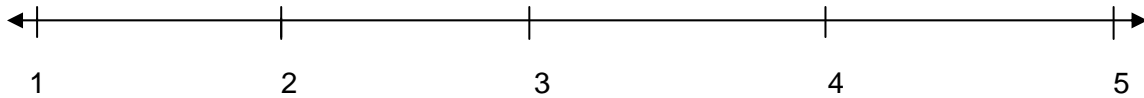
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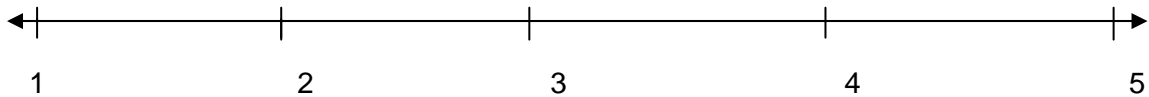
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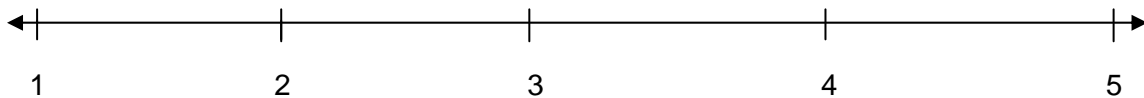
16 Rating of how successful you feel about managing your own learning



17. Your rating of how much you think you are improving in you school work



18. Your rating of how interested you are in your learning



Appendix E

Participant Information Sheet

Making sense of assessment in a dynamic classroom

Information for school principal

Dear

I am a Masters in Education student with the University of Canterbury. Last year I was in your school as the coordinator of the Education Review team. I noticed the very good work that was going into establishing purposeful assessment practices at classroom and school wide levels.

Currently I am on leave from my position with The Education Review Office to concentrate on completing my Masters in Education degree. My research is completely independent of my role as an Education Reviewer and aims to contribute to the field of knowledge about school and classroom assessment practices. My study has been reviewed and approved by the University of Canterbury College of Education Human Ethics Committee. My supervisor in the School of Educational Studies and Human Development is Associate Professor Alison Gilmore. Ph 364 2259 Ext 6259.

The dissertation I am undertaking is about the assessment practices of a group of experienced and proficient teachers at four different schools. The aim is to explore the ways in which these teachers view, understand and manage their assessment practices and how they make sense of the complexities of assessing student learning. I would very much like to work in your school because of the supportive school culture and would like to work closely with one of your experienced and proficient teachers. I am seeking your approval to allow me to approach a teacher of your nomination and to allow the study to happen within the school. I would particularly like to work with Kaye Royale.

The study will involve the following:

- An initial interview with the participating teacher about their assessment practices. I want to discuss with them how they view, manage and use assessment for learning, accountability and reporting purposes. (*I can show you the proposed questions if you wish*)
- A discussion with a focus group of six students from the teacher's class so that they can tell me about their understandings of assessment and their learning strategies. The focus group would meet with me for 30 to 40 minutes and permission would be formally sought from the students and their parents. (*I have prepared Information and Consent forms that I can show you*)
- A debrief discussion with the participating teacher so I can clarify anything that I would like to know more about and answer any of their questions.
- A discussion with the teacher or committee with responsibility for assessment in the school about their role, priorities and functions. (This is to establish the school wide context that influences the participant teacher.)

I would like to make audiotapes of these discussions so that I can listen to them again and make written records of them. I will show the teachers and students the transcripts so they can check for accuracy and give me any feedback or further points of clarification. Confidentiality and anonymity are assured. I will not use the name of your school or that of any teacher or student in my written report or for any other purposes.

(Principal's name), I will contact you personally in one week to ask you if you agree to me contacting a teacher that you recommend to take part in the research and to answer any questions you may have. Alternatively you may want to talk with one of my supervisors. Participation in this project is voluntary and any participant can withdraw from the project at any time without repercussions.

If you have any complaints at any point of the research process you may contact the Chair of the University of Canterbury College of Education Ethics Committee; see contact details below.

(Principal's name) I would really appreciate your participation in my study. It will be very interesting to discover how experienced teachers in different schools are making sense of the complexities of assessing student's learning. If your school takes part, when the research is completed, I can give you a copy of the written report for your own information and interest.

Signed: _____
University of Canterbury

Date: _____

Appendix F

Participant Information Sheet

Making sense of assessment in a dynamic classroom

Information for invited participant teachers

Dear (Participant Name):

I am Masters of Education student at the University of Canterbury. Currently I am on leave from my position with The Education Review Office to concentrate on a research dissertation. My research is completely independent of my role as an Education Reviewer and aims to contribute to the field of knowledge about school and classroom assessment practices. The study has been reviewed and approved by the University of Canterbury, College of Education Human Ethics Committee.

My dissertation is about the assessment practices of a group of experienced and proficient teachers at four different schools. You are one of the four teachers who I am inviting to work with me in this project. I have discussed my project with your principal and he/she has suggested your name and consented to me approaching you and seeking your participation.

If you accept my invitation it will involve the following:

- An initial interview about your assessment practices. I want to discuss with you how you view, manage and use assessment for learning, accountability and reporting purposes.
- A discussion with a focus group of six students from your class so that they can tell me about their understandings of assessment and their learning strategies. The focus group will meet with me for 30 to 40 minutes and permission will be formally sought from the students and their parents.
- A debrief discussion between you and me so I can clarify anything that I would like to know more about and you can tell me about anything you think we have omitted.

I would like to make an audiotape of our discussions so that I can listen to them again and make a written record of our conversation. If this is okay with you, I will show you the transcript so you can check it is correct and give me any feedback or further points of clarification. Confidentiality and anonymity will be assured. I will not use the name of your school, your name or that of any other teacher or student in my written report.

I will contact you personally in a week to ask you if you agree to take part in the research and to answer any questions you may have. Alternatively you may want to talk with my supervisor in the School of Educational Studies and Human Development, Associate Professor Alison Gilmore: Ph 364 2259 Ext 6259. Participation in this project is voluntary and any participant can withdraw from the project at any time without repercussions.

If you have any complaints you may contact the Chair of the University of Canterbury, College of Education Ethics Committee; see contact details below.

(Person's name) I would really appreciate your participation in my study. It will be very interesting to discover how a group of experienced teachers in different schools are making sense of the complexities of assessing student's learning. If you take part, when the research is completed, I can give you a copy of the written report for your own information and interest.

Signed: _____
University of Canterbury

Date: _____

Appendix G

Making sense of assessment in a dynamic classroom

Information for Parents/Caregivers

Dear Parents and Caregivers

My name is Lois Christmas. I am a Masters in Education student with the University of Canterbury. I have a long career in education and I am currently on leave from my position with the Education Review Office to finish my degree at the University of Canterbury. My research is completely independent of my role as an Education Reviewer and aims to contribute to the field of knowledge about teachers' assessment practices.

I am completing a dissertation about the assessment practices of a group of experienced and proficient teachers from four different schools. Your child's teacher is one of the four teachers who have consented to work with me in this project. We will be working to develop cameos of classroom assessment practice. I have discussed my project with the school's principal and the school has endorsed my project and supported the notion that four teachers be my participants.

As part of my study I will be interviewing teachers to find out about their learning conversations with children and how they respond to the children's work and questions. I intend to talk to students so that they can tell me what their teacher does to help them learn in the classroom. I would like to talk to students as a group and invite you to consider granting permission for your child to be a member of such a group. The focus group will meet with me for 30 to 40 minutes and I would like to audiotape our discussion. I will transcribe the discussion and the students can read this and give me any feedback.

Confidentiality and anonymity will be assured. I will not use the name of the school, teacher or students in my written report. Each of the students will have a code name so no-one else will know who has made various comments in the focus group interview.

If you agree for your child to take part in the research, please sign the consent form below. I have also provided a consent form for your child to sign.

If you have any questions about this project you can talk to me or my supervisor. My supervisor in the School of Educational Studies and Human Development is Associate Professor Alison Gilmore. *Ph* 364 2259 *Ext* 6259. If you have any complaints you may contact the Chair of the University of Canterbury College of Education Ethics Committee; see contact details below.

Participation is voluntary. If your child changes his/her mind about sharing their ideas with me that is fine. All they have to do is tell their teacher. I would really enjoy listening to your child's ideas about learning and seek your approval for them to participate.

My study has been reviewed and approved by the University of Canterbury College of Education Human Ethics Committee.

Signed: _____
University of Canterbury

Date: _____

Appendix H

Participant Information Sheet

Making sense of assessment in a dynamic classroom

Information for Students

Hello everyone

My name is Lois Christmas. I am doing some research at the University of Canterbury. I am interested in talking to you about the ways your teacher assesses your work and talks with you about your learning. I also want to ask you how you act on what the teacher tells you and what strategies you have to improve your own learning.

I will be talking with teachers and I am hoping to talk to you in a group with other children about your learning strategies. They won't be hard questions. We will just have a discussion about the sorts of things that happen in your classroom and how your teacher helps you learn.

I would like to make an audiotape of our discussion so that I can listen to it again later and make a written record of our conversation. I will give your group a written copy of our discussion so you can read what we talked about and give me any feedback. I will be writing a report but no names of the people I talk to will be used in this report. You might like to choose another name for yourself so that I can write about you without anyone knowing who you are.

If you would like to help me in my study please sign the consent form and return it to your teacher. Your parents/caregivers will need to sign a form too. If you have any questions you can talk to your teacher or your parents/caregivers. However it is completely up to you whether you want to take part or not and it is okay to change your mind about taking part during the study.

Lois Christmas

Appendix I

Participant Information Sheet

Making sense of assessment in a dynamic classroom

Information for assessment leader/ leaders

Dear

I am Masters of Education student at the University of Canterbury. Currently I am on leave from my position with The Education Review Office to concentrate on a research dissertation. My research is completely independent of my role as an Education Reviewer and aims to contribute to the field of knowledge about school and classroom assessment practices. The study has been reviewed and approved by the University of Canterbury College of Education Human Ethics Committee.

My dissertation is about the assessment practices of a group of experienced and proficient teachers at four different schools. As a part of the study I want to talk with the teacher/s in each school who and develop and lead the school's assessment practices. This will help me understand the context the teacher works within, the school expectations for classroom and school wide assessment and how the school supports the teacher's practices. I have discussed my project with John and he has consented to me approaching you and seeking your participation.

If you accept my invitation it will involve the following:

- A discussion about school assessment practices. From this discussion I will seek to understand how your school develops, manages and implements assessment within the school.

I would like to make an audiotape of our discussion so that I can listen to it again and make a written record of our conversation. If this is okay with you, I will show you the transcript so you can check it is correct and give me any feedback or further points of clarification. Confidentiality and anonymity will be assured. I will not use the name of your school, your name or that of any other teacher or student in my written report.

I will contact you personally in a week to ask you if you agree to take part in the research and to answer any questions you may have. Alternatively you may want to talk with my supervisor in the School of Educational Studies and Human Development, Associate Professor Alison Gilmore. (Ph 364 2259 Ext 6259.) Participation in this project is voluntary and any participant can withdraw from the project at any time without repercussions.

If you have any complaints you may contact the Chair of the University of Canterbury College of Education Ethics Committee; see contact details below.

(Person's name) I would really appreciate your participation in my study. It will be very interesting to discover how a group of experienced teachers are making sense of the complexities of assessing student's learning within the context of the school that is working hard to establish purposeful assessment practices. If you take part, when the research is completed, I can give your school a copy of the written report for your own information and interest.

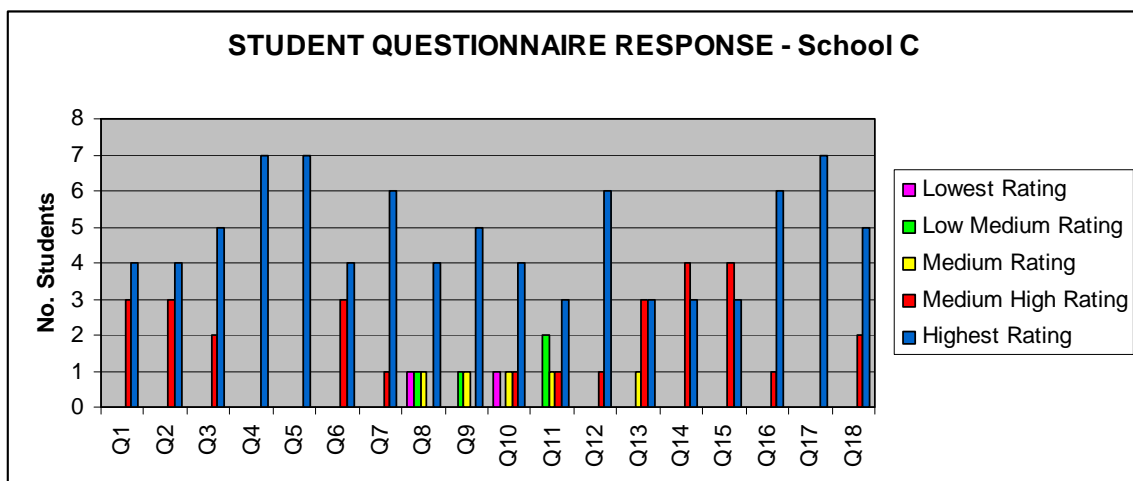
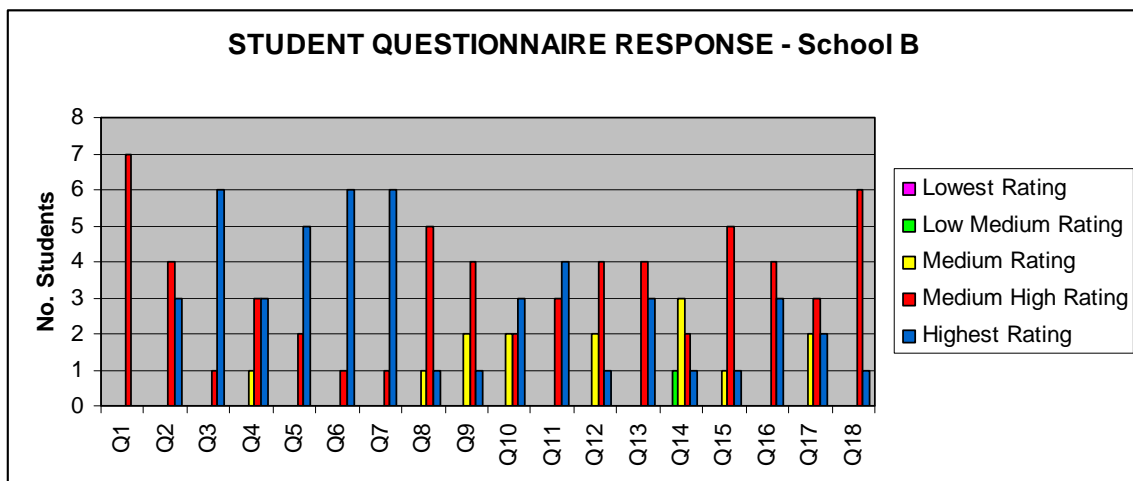
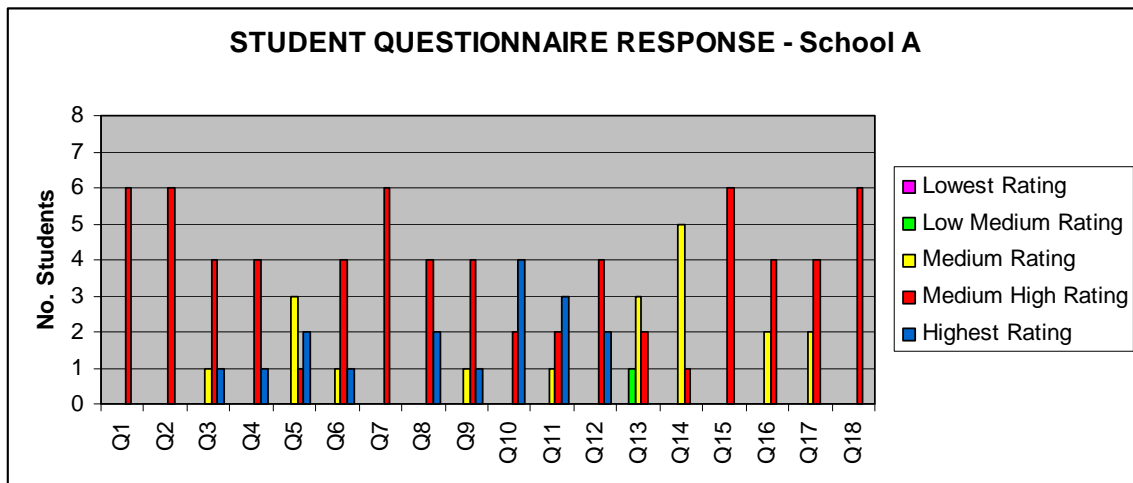
Signed: _____
University of Canterbury

Date: _____

(This form is intended for the participating teacher and the assessment leader or committee members)

Appendix J

Graphs of questionnaire results fro individual schools



STUDENT QUESTIONNAIRE RESPONSE - School D

