

# **Measuring Success**

## **Using NEMP to Conduct School-Wide Review and Development**

**A National Education Monitoring  
Project Probe Study**

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## Executive Summary

Since the early 1990s a key management function in all New Zealand schools has been to review school-wide curriculum programmes for purposes of reporting student achievement and developing school effectiveness. Rapid reform under Tomorrow's Schools, including the dismantling of traditional support structures, meant that efforts by schools to develop review systems were often fragmentary. The Education Standards Act (2001) introduced stricter requirements for strategic planning and the reporting of school-wide achievement data linked to specific learning targets. Recently, the Ministry of Education's National Assessment Strategy directed schools to apply questions about student assessment at the strategic level in order to lift achievement of the entire student body (MOE, 2005; McMahon, 2002).

This Probe study describes a model of school-wide curriculum review developed at Ashburton Borough School. The report describes early initiatives to devise school-wide review procedures and the critical decision to adopt NEMP as a model for conducting review and a source of data for making judgements about student achievement.

The Ashburton Borough School model, operating since 1999, works in a four year cycle. In each year two essential learning areas are reviewed and developed. The review phase centres on the analysis of student achievement data. For this purpose a cross-section of Y4 and Y8 students are tested using NEMP items. Results from Ashburton Borough students are compared with NEMP's nationwide data.

This NEMP-based review model is used primarily to direct staff professional development programmes at Ashburton Borough School. Significant differences between the performance of our own students and students tested by NEMP become the focus for staff discussion and development. Using well-sourced data as the basis for making judgements about our teaching and learning programmes improves the quality of professional discourse. Early results from our second cycle of review suggest that highly targeted professional development activities have succeeded in

reducing specific gaps in student achievement. This is discussed in the report with reference to mathematics programmes.

The development of our curriculum review model drew strongly on research about school effectiveness; particularly the work of Sergiovanni, Fullan, Leithwood and others which demonstrates that student achievement is improved when a school becomes an organisation where all members are actively engaged in learning. Stewart & Prebble's ideas about continuous school development led us towards a holistic model of school management that integrates curriculum review, professional development and staff appraisal programmes.

This Probe study is intended as a practical resource, a guide to conducting effective school-wide review using NEMP as the basis for making judgements about student achievement. Readers seeking further information are encouraged to contact the author.

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# Chapter One: Introduction

## Key Points

- The challenge for schools since the early 1990s has been to find a way of reviewing student achievement that is both workable and meaningful.
- The National Curriculum Framework and subsequent regulations require schools to maintain an ongoing programme of review.
- Research on schools argues that locally-devised solutions to problems are more effective than those imposed by central administrators.
- This report describes a model of school-wide review developed at Ashburton Borough School.
- The Ashburton Borough School model is a process of collecting data, debating the meaning of the data and improving teaching and learning through carefully planned staff professional development.

## 1.1 School Reform in the 1990s

Since the advent of Tomorrow's Schools in 1990 New Zealand schools and teachers have faced rising expectations – from parents, Boards of Trustees and the Ministry of Education - in the assessment and evaluation of student achievement.

The educational reforms of Tomorrow's Schools emerged from the political, economic and social transformation of New Zealand in the 1980s, a transformation driven by market ideologies. At the heart of these changes was the belief that models of efficiency developed in economics and business could be applied to social services traditionally managed by centralised bureaucracies. By initiating Tomorrow's Schools reformists succeeded in devolving responsibility for school management to

local communities, a necessary precursor, they believed, to building an education system that was innovative, responsive to consumer demand and efficient (Bates in Middleton, Codd, & Jones, 1990; McQueen, 1992; Stewart & Prebble, 1993).

## **1.2 Student Achievement**

The National Education Guidelines (1993) made it clear that student achievement was the measure of a successful school. For example, National Education Goal one is:

The highest standards of achievement, through programmes which enable all students to realise their full potential as individuals and members of society.

National Administration Guidelines defined the responsibilities of school boards, through principals and staff, to foster student achievement by implementing balanced programmes of work, monitoring student progress against national achievement objectives, implementing learning strategies to overcome barriers to learning, and reporting on student progress (NAG1). Schools were responsible for developing and using assessment procedures that enhanced student achievement (Ministry of Education, 1993, p.26). Assessment data were to be used not only to promote individual achievement, but also to provide “a clear school profile of overall levels of student achievement” (Ministry of Education, 1994, p.12). NAG4 required schools to “maintain an ongoing programme of self-review”.

## **1.3 The Challenge for Schools**

The challenge for schools since the early 1990s has been to find a way of conducting school-wide review that is both workable and meaningful. In the view of Stewart & Prebble (1993):

It has always been difficult to decide what schools should be doing, difficult to be sure that what is going on in classrooms is addressing these purposes, and often equally difficult to identify and measure the outcomes of that schooling (p.15).

The problem for schools was, in some ways, compounded by the very nature of Tomorrow's Schools, under which central support agencies were dismantled and schools applied a devolved management model with very limited guidance from a Ministry of Education that was conceived as a funding and policy-making agency.

With the demise of the Department of Education, along with its traditional support structures, a few schools failed, some flourished, and most struggled to develop systems that met their responsibilities to assess, evaluate and review student achievement. As Joyce & Showers (1995) have noted, school systems that adopt site-based management models are often characterised by poor support in developing effective self-review processes, which was true in New Zealand throughout the 1990s.

By 1998 the Education Review Office could report that while classroom assessment practice in New Zealand schools was generally adequate the aggregation and use of assessment data at school-wide level was being neglected (ERO, 1998A). ERO lamented the lack of information about student achievement compared with national standards and information about the relative effectiveness of school in improving student achievement (p.8). In other words, while schools were good at collecting and using assessment information to plan and deliver effective learning, they were less good at monitoring overall rates of progress of their students, compared to themselves over time or compared to other schools and other groups of students.

## **1.4 Tensions Between Self-Management and Central Control**

Questions of assessment and self-review were closely linked to tensions inherent in Tomorrow's Schools between self-management and central control. The wholesale replacement of a centrally-managed education system with a model of site-based management was unprecedented, and for the first few years principals, teachers and Boards of Trustees were preoccupied with establishing effective management systems, consulting with communities and writing policies. Management inexperience, inadequate guidance and sheer over-work meant that the evaluation of

teaching and learning programmes was often conflated into day-to-day assessment procedure.

By the late 1990s schools were gaining confidence in their ability to manage themselves and were reluctant to surrender independence to a resurging Ministry of Education. Government proposals in 1998 to introduce national testing, supported by ERO (1998B), were widely criticised, mainly on the grounds that the government was motivated more by a desire to control and manage schools (through, for example, using test results to publish league tables) than to enhance student achievement (Gilmore, 1998).

While national testing has, for now at least, been abandoned the efforts of central government to monitor school outcomes continues. The Education Standards Act (2001) introduced stricter requirements for strategic planning and the reporting of school-wide achievement data linked to specific learning targets. The Ministry of Education's National Assessment Strategy directs schools to apply questions about student assessment at the strategic level in order to lift achievement of the entire student body (MOE, 2005; McMahon, 2002).

While these actions may be the reasonable exercise of government responsibility to protect taxpayer investment and advance educational achievement, they are sometimes perceived by schools as diminishing their power to act independently. The goal of community responsibility and site-based management that was at the heart of Tomorrow's Schools is compromised.

## **1.5 Challenges to Teacher Professionalism**

For many teachers the tension between self-management and central control challenges their status as professionals. The hallmark of a professional is pride in one's work, a desire to improve and the motivation to do so independent of the carrots and sticks of central government. As professionals, teachers desire to improve student achievement through careful assessment of student learning and the review of

curriculum programmes. In this they are motivated by three key questions (McMahon, 2002):

- Where are we now?
- Where do we want to be?
- How will we get there?

Many principals and teachers have been encouraged to defend their professionalism by a growing body of research on school effectiveness that supports the idea of self-improvement through collaboration and whole-school development (Sergiovanni, 1987; Stewart & Prebble, 1993; Leithwood & Louis, 1998). These and other writers argue that the best people to guide school development are teachers and principals, in collaboration with policy makers, researchers and their communities. Stewart & Prebble (1993) argue forcefully that when innovations are imposed on schools they almost always fail (p.73). They criticise the assumption of central planners in the 1990s that teaching must be a solitary endeavour where teachers have little influence over each other and competition for superior learning outcomes is the best motivation. “The great challenge for tomorrow’s schools should be to create supportive learning communities where teachers are encouraged to use each other’s experience and beliefs as a mirror to reflect on their own” (p.19).

## **1.6 Case Study: Ashburton Borough School**

### **Description of the Case Study School**

This Probe Study report describes a model of school-wide curriculum review that has operated at Ashburton Borough School since 1999, and grew from a strong desire among the principal and staff to assert their professional expertise to improve student learning.

Ashburton Borough School is a decile 8 full primary school. The school is located near the centre of Ashburton but draws its students from both urban and rural communities across Mid-Canterbury. When we began to develop the model of self-

review described in this report it was just one of many changes happening in the school at that time. Recapitation in 1998 saw the roll expand rapidly from under 300 to over 400 students by 2001. A ministerial review of all schools in Mid-Canterbury in 1997-98 led to the decision to incorporate a nearby rural school and maintain it as a two-teacher branch of the main school. At the same time a major building programme saw the construction of new administration facilities, the addition of a performance centre and the removal of the school swimming pool. All these developments required extensive community consultation and a massive commitment of time and energy from the principal, BOT and staff.

### **Developing a Model of School-Wide Curriculum Review**

The development of curriculum review at Ashburton Borough School is described in this report within the context of the educational changes of the 1990s, particularly the expectation that self-managing schools review and develop programmes that improve student learning.

The model applies a relatively straightforward process of collecting data, debating the meaning of the data and improving teaching and learning through carefully planned staff professional development.

### **Using NEMP in School-Wide Review**

This report specifically focuses on how the curriculum review programme at Ashburton Borough School uses test materials, data and conclusions from the National Education Monitoring Project (NEMP). Case studies of recent school-wide reviews of mathematics and social studies programmes are provided as detailed examples of how to use NEMP to review student achievement and direct staff development.

This report also describes how curriculum review is part of a matrix of management systems that contribute to the fostering of reflective practice at Ashburton Borough School, the effect of this on staff engagement in professional discourse and the

implications for student achievement. The influence of current research on best practice and educational theory is included.

It is hoped that this report is a practical guide to establishing and maintaining an effective process of school-wide curriculum review. To this extent, along with the procedures of review, consideration is given to the pitfalls and challenges of the model, as well as to its perceived strengths.

# Chapter Two: Developing a Curriculum Review Programme

## Key Points

- Our review model is underpinned by a desire to build a learning culture that is collaborative and collegial, that emphasizes continuous professional growth and improves student learning.
- Our early efforts at school-wide review highlighted a lack of strong nationwide data about student achievement.
- Using data as a basis for making judgements about student achievement and to plan staff development cuts through the often tangled fabric of staff relationships and expectations.
- In 1999 we introduced a four year review cycle. A cyclical programme enables a school to maintain a balanced coverage, to 'normalise' review and to control the pace of change.
- The significance of curriculum review was supported by changes in our school's management structure.

## 2.1 School-Wide Review and Strategic Planning

At Ashburton Borough School, wholesale, if occasionally grumbling, compliance with change in the early years of Tomorrow's Schools gradually transformed into a growing confidence in our skills at strategic planning and school-wide management.

The challenge we faced in developing our model of self-review was to slow down the process of change to a point where we felt it was manageable and useful, and to improve both the morale and effectiveness of staff by building a learning culture that was collaborative and collegial, that emphasized continuous professional growth and led to improved student learning.

## 2.2 Early Initiatives

From the outset our principal was clear that our model of curriculum review was not to be a woolly process designed merely to comply with government directives. His view of strategic planning saw it as transforming the broad purpose of vision - where do we want to be in the future? – into shorter term operational planning. His view echoes much of the research on school development (Stewart & Prebble, 1993; Piggot-Irvine, 2005; Joyce, Calhoun & Hopkins, 1999; Davies, Davies and Ellison, 2005). If the outcome was intended to be improved student learning then the process had to begin with clear goals and a strong process that would engage all staff and be owned by them. The model had to be challenging but rewarding. It had to be structured, yet flexible.

Our earliest efforts unwittingly echoed Stewart & Prebble's (1993) idea that:

...in order to change their practice people must change their understanding. In order to change their understanding, they need to be aware of what they are doing and why. The most straightforward way in which they can become aware of their practice is to gather data about what they are doing, and argue about its meaning with their colleagues (p.74).

We began by asking a few challenging questions:

- How well are our students performing?
- How do we know?
- What effect does our teaching have on student achievement?
- What benchmarks can we establish to compare our students' achievement with students in other schools and students in our school at other times?

In 1998, the principal challenged staff to explore a process of establishing benchmarks of performance in each of levels 1 – 4 of the national curriculum as part of a review of written language programmes. Staff spent considerable time gathering writing samples, identifying important features and attempting to define exemplars. The

process failed to achieve consensus but it established several important things, namely it:

- introduced staff to discussion and debate about student achievement at a level not previously engaged
- asserted the expectation that student achievement is at the centre of review
- established the understanding that worthwhile curriculum review is slow and deliberate and must receive high priority to become effective
- highlighted the lack of good, nationally-referenced data.

## **2.3 Data: Essential to Effective Review**

### **Placing Data at the Centre of School-Wide Review**

The question of how to access good data about collective student achievement was a major challenge. We employed a range of assessment tools and techniques to gather data about individual achievement but found few that gave us useful comparative information against norms or criteria. We couldn't confidently answer the question, 'how well are our students doing?'

As evidenced by Stewart & Prebble above, recent models of school-wide review commonly emphasize the sharing of data as central to the development of a more collaborative approach to school improvement than has been common in the past (Sergiovanni, 1987; Stewart & Prebble, 1993; Leithwood & Louis, 1998). Timperley (2003, 2004) calls this the "new professionalism" in teaching, one which emphasizes schools as professional learning communities.

A professional learning community is one in which teachers update their professional knowledge and skills within the context of an organised, school-wide system for improving teaching practices. (2003, p.3)

Basing school-wide review upon carefully gathered and thoroughly analysed data promises greater likelihood that staff will buy into the idea of a professional learning community.

If an entire staff is to spend time and energy in a collective effort to address a school need, it should have some confidence that the content selected has a fairly high probability of accomplishing its objective (Joyce & Showers, 1995, p.102).

Many review models place the gathering and interpretation of data at or near the centre of the process (Piggot-Irvine, 2005; Davison, 1999; Fullan, 2001). Review models commonly comprise the following elements:

- Recognition of a problem
- Data gathering
- Feedback
- Development and focus of change strategy
- Intervention
- Analysis and evaluation

### **Data is Impartial**

Stewart & Prebble (1993) touch on an important dimension of data gathering – that it is the “least threatening form of collective action that a staff can undertake” (p.74). They describe data as impartial: it makes no assumptions about the nature of the school and any competing ideologies. “It simply challenges staff to look at what is happening in the school right now...and to debate its significance among themselves.”

When we established our current model of curriculum review at Ashburton Borough School we probably didn't appreciate Stewart & Prebble's point, but our experiences during the past six years confirm their view. Using data as a basis for making judgements about student achievement and to plan staff development cuts through the often tangled fabric of staff relationships and expectations. It shifts the basis of decision-making from the PHOG (prejudice, hunch, opinion and guesswork) identified by Macbeath & Mortimore (2001) to the relative neutrality of numbers. This has been important in helping us to allay the fears of those who doubted the motives of the model - that it was a system of control or an ad hoc appraisal method.

The neutrality of data can be a source of anxiety for some teachers, especially when previously they have kept assessment data private. Leithwood & Louis (1998: 138-

144) describe a major research initiative in Ontario that stumbled because of the suspicion by teachers involved in the project that the data collected were being interpreted in preconceived ways by researchers and central authorities to back up pre-conceived points of view. They complained that “teachers are never shown how research can affect their own classrooms, or how ideas can be applied in the classroom”.

Subsequent developments of our model provide further safeguards for the neutrality of data. Testing (data gathering) is conducted by the curriculum manager, but the interpretation of the data, and the conclusions to be drawn from it, remain the responsibility of the curriculum committee which is not usually led by, and sometimes does not even include, a member of the management team.

### **Data Affirms Success**

As well as allowing us to confront our shortcomings data helps us recognise our successes. Teachers are sometimes reluctant to take credit for student achievement. At times we have been able, through follow-up testing, to identify clearly that the gains made by our students are closely linked to staff development programmes arising from curriculum review. In other words what we do as teachers really does make a difference. These findings serve the dual purpose of confirming the worth of the model and promoting confidence among staff.

## **2.4 Developing the Model: Initiatives in 1999**

### **Reviewing Existing Programmes**

Following the review of written language in 1998 an internal review of school-wide programmes was conducted in 1999. This highlighted useful structures within the school, such as;

- programmes of work for all curriculum areas
- committees to oversee curriculum areas
- procedures for curriculum planning and review

- regular professional development.

However there were gaps and inconsistencies in our review process. Some staff were unclear about the purposes of review and had mixed feelings about the moderation activity they had undertaken in written language. Some considered the exercise had been hasty and subjective and they did not see how it could benefit what they were doing in the classroom.

## **Identifying Gaps**

Our school-wide review programme developed through the 1990s attempted to do too much in any year. For example, in 1999 we planned to review art, Maori, technology and EOTC, while also focusing on music and revisiting all other curriculum areas. Discussions among staff revealed a lack of clarity about the meanings of the three components in the process: review, revisit and focus. These terms were not defined as clear procedures that staff understood or applied consistently. Curriculum development goals tended to be generalised and our 1999 review noted “the more tightly-worded we make objectives, the more useful they will be.”

Curriculum review was not adequately linked to other aspects of school-wide review, particularly performance management and professional development. Our report raised several important questions about this:

- What systems were in place for reviewing other NAGs?
- How does curriculum review link to budget review?
- What accountability do curriculum committees have to the principal and BOT?
- How does curriculum review link to performance management and reporting processes?

As a result of this report we reshaped our review processes, building on our existing framework and the initiative from the review of written language in 1998.

## **Introduction of a Four-Year Review Cycle**

One significant change was the introduction of a four-year cycle encompassing the review, development and monitoring of all essential learning areas (Table One).

Within this model each learning area is reviewed during two school terms, developed during the following two terms and monitored across the entire cycle. For example, in 2000, Health and PE were reviewed in terms one and two and developed in terms three and four. At all times one learning area is being reviewed and another developed. In 2000 (the first year of the first cycle) we included The Arts as an additional area of focus to coincide with the introduction of the last of the new curricula. Language was split into two separate strands, written language (reading and writing) and visual and oral language.

In the second cycle, beginning in 2004, we combined Science and Technology and introduced ICT/Maori as a separate strand (Table Two). This was in response to changing priorities and a better understanding of how to use the model. We consider that for maximum effect the review process should be allowed to run with few alterations from one cycle to the next, enabling us to build a pattern of performance in each learning area.

**Table One: Four-Year Review and Development Plan, Cycle One**

Year		Term One	Term Two	Term Three	Term Four
One 2000	New	The Arts			
	Review	Health & P.E.	Science		
	Develop	Mathematics		Health & P.E.	
Two 2001	Review	The Arts		Language (Visual and Oral)	
	Develop	Science		The Arts	
Three 2002	Review	Technology		Language (Written)	
	Develop	Language (Visual and Oral)		Technology	
Four 2003	Review	Social Studies		Mathematics	
	Develop	Language (Written)		Social Studies	
All Years	Monitor	All learning areas that are not being either reviewed or developed in any year will be monitored by curriculum committees, reporting to the principal			

**Table Two: Four-Year Review and Development Plan, Cycle Two**

Year		Term One	Term Two	Term Three	Term Four
<b>One 2004</b>	<b>Review</b>	<b>Health &amp; P.E.</b>		<b>Science &amp; Technology</b>	
	<b>Develop</b>	<b>Mathematics</b>		<b>Health &amp; P.E.</b>	
<b>Two 2005</b>	<b>Review</b>	<b>The Arts</b>		<b>Language (Visual and Oral)</b>	
	<b>Develop</b>	<b>Science &amp; Technology</b>		<b>The Arts</b>	
<b>Three 2006</b>	<b>Review</b>	<b>Maori &amp; ICT</b>		<b>Language (Written)</b>	
	<b>Develop</b>	<b>Language (Visual and Oral)</b>		<b>Maori &amp; ICT</b>	
<b>Four 2007</b>	<b>Review</b>	<b>Social Studies</b>		<b>Mathematics</b>	
	<b>Develop</b>	<b>Language (Written)</b>		<b>Social Studies</b>	
<b>All Years</b>	<b>Monitor</b>	<b>All learning areas that are not being either reviewed or developed in any year will be monitored by curriculum committees, reporting to the principal</b>			

## **Defining the Three Stages: Review, Development, Monitoring**

As part of our development of school-wide review we attempted to define the activities that would happen at each stage of the process.

### **Review**

- Report achievements and challenges in the delivery of programmes
- Monitor student achievement through testing a sample of students and comparing results with national data
- Survey staff to determine attitudes, strength/weaknesses and opportunities for professional development
- Compile a complete inventory of resources
- Plan staff development
- Budget for staff and programme development.

### **Develop**

- Conduct staff development
- Upgrade or replace resources
- Promote the curriculum area to staff, BOT and community
- Provide additional classroom support by way of sharing expertise among existing staff, hiring staff with expertise as opportunities arose and use of external experts from the local College of Education advisory service or other schools
- Link the curriculum area under development with staff performance appraisal goals.

### **Monitor**

- Check and report on the changes made in the review and development phases through appraisal, further testing and reporting to staff meetings.
25. Report annually to principal and BOT
- Adjust the review targets as teachers work with change and new initiatives/ideas enter the school.

## **Establishing Review as “Incremental Improvement”**

By establishing a four year cycle of review we hoped to give ourselves a platform upon which to review and develop our programmes in a considered way. While school change may begin with a “significant problem or challenge” (Stewart & Prebble, 1993, p.56) our experiences over the past six years tend more to the view of Leithwood & Louis (1998) that “organisational learning can be stimulated by relatively everyday events: ongoing attempts at incremental improvement and the like. It does not require a crisis, as some of the literature from non-school organizations appears to suggest” (p.71).

This was poignant in the 1990s when politicians and some policy makers typically justified their actions by describing education as a system so deeply in crisis that it needed constant overhaul. By 1999 teachers were tired of hearing this, morale was suffering and some school managers felt they were no closer to realising the lofty goals of Tomorrow’s Schools than they had been several years earlier.

## **2.5 Strengths of a Four Year Cycle**

At Ashburton Borough School we believe that the introduction of a cyclical approach to curriculum review strengthens our process in several important ways.

### **The School Controls Change**

First, it sends a signal to staff and the community that we control the pace and nature of change in our school. It gives us the confidence to judge how we will shape existing programmes and what new ideas we may introduce to the school.<sup>1</sup>

### **Coverage is Balanced**

Second, it gives us confidence that, over time, we will cover all our curriculum areas in a thorough and considered way. As the leader of, say, the arts curriculum

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<sup>1</sup> How we balance this with requirements from the Ministry of Education to introduce new programmes, for example the Numeracy Development programme, is discussed in section 8.

committee I can be assured that my subject will get its turn at being reviewed, with the budget and professional development resources to accompany it.

### **Review is ‘Normal’**

Third, it maintains review as an essential, everyday part of the way we do things at Ashburton Borough School. Our method is slow, considered, and works from the ground up. Our thinking has shifted from the deficit model that often pervades school development. Staff are more open to change that is seen to be building on what is already strong rather than fixing what is perennially broken. Every staff member is responsible for the success of the programme and all benefit from it. We share the view of Joyce, Calhoun & Hopkins (1999) that “school improvement is a part of the ordinary process of operating the school rather than a response to a belief that things are terribly wrong” (p.8).

## **2.6 Linking Review to Management Structure**

### **Identifying Key Management Tasks**

The establishment of our current review model was closely linked to a restructuring of management roles. In his desire to build a culture of inquiry and to promote strategic management practices, the principal identified three key management tasks: appraisal, curriculum and pastoral care of students. He introduced a flat management structure, removing the titles of DP and AP, and assigned the three key management tasks to senior managers in the school. Management units were attached to the tasks, as shown in Table Three.

**Table Three: Key Management Tasks and Unit Values**

	<b>Task</b>	<b>Unit Value</b>
<b>1</b>	Curriculum Management	2
<b>9</b>	Appraisal	2
<b>9</b>	Pastoral Care of Students	1
<b>9</b>	Area (Syndicate) Leadership	1 unit x 4
<b>2</b>	Curriculum Manager	1
<b>0</b>	Curriculum Review	1
<b>0</b>	Appraisal	1
<b>0</b>	Pastoral Care	1
<b>2</b>	Area Leadership	1 x 5
	Behaviour Management	1

In 1999 the DP became appraisal manager with two units, the AP became pastoral care manager with one unit and a third staff member was appointed curriculum manager, with two units. Each of these staff, plus one other, received an additional unit for area (syndicate) leadership.

In 2002 the incorporation of a country school site and a desire among staff for a more visible chain of responsibility led to the reintroduction of DP and AP positions and several other changes to the management structure of the school. While the units assigned to the DP and AP (three units for DP, two for AP) reflect their positions and their wide range of responsibilities in the school, all units remain linked to specific management functions, maintaining the focus on those management areas we believe are most significant in the life of the school. For example, since 2002 the DP's main roles have been curriculum review, appraisal and area leadership, while the AP's two

units are tagged to behaviour management and area leadership. Some of these roles are described further in section 4.

## **Building Leadership**

The effect of these management changes has been to build leadership capacity in the school. Since 1999 several key management portfolios have changed hands as staff have been replaced and individuals with particular management strengths promoted. The management culture in the school has been broadened to the point where the current management team consists of eight people and encompasses responsibilities for health & safety, special needs and leadership of the country school site, in addition to the roles described above.

## **The Importance of Curriculum Committees**

As a further management initiative the 1999 review model strengthened the place of curriculum committees. Assisted by the curriculum manager, committees were responsible for leading all phases of the review process; from gathering data, using data to plan and conduct effective staff development, managing the curriculum budget, monitoring progress and reporting to the principal and BOT. In doing this we hoped not only to share the workload of review among all staff but also stimulate the best conditions for staff to engage in meaningful professional talk and discussion.

By engaging the curriculum committees as leaders in the review process we hoped to foster “norms of mutual support among teachers, respect for colleagues’ ideas, and a willingness to take risks when attempting new practices” (Leithwood & Louis, 1998, p.74). To this extent we hoped our own learning as teachers could embrace some of the techniques and attitudes we know work well with our students.

# Chapter Three: Using NEMP to Conduct School-Wide Review

## Key Points

- At Ashburton Borough School student achievement is reviewed using NEMP.
- NEMP provides a wide range of practical and effective assessment tasks, covering the entire curriculum.
- NEMP data identifies national patterns of performance and can help schools make sense of their own data on student achievement.
- NEMP's four-year cycle is a useful model for schools as it encourages a view of school development that is 'evolutionary'.
- Using NEMP data a school may compare the performance of its students with other groups of students in a relatively impartial way.
- Access to NEMP tasks and data is relatively easy.

## 3.1 Identifying an Assessment Resource

A significant part of the development of an effective model of curriculum review at Ashburton Borough School was the identification of an assessment resource to monitor student achievement through data that allowed comparison of the achievement of our students with students in other schools. Our attempt to monitor our writing programmes in 1998 convinced us that developing our own exemplars or other benchmark information was beyond our resources.

To achieve our aims for our review model we needed a resource that:

- offered test materials to assess a wide range of knowledge, skill and understanding
- covered the entire curriculum
- gave access to wide-ranging comparative data, against which we could measure the progress of our students.

We were aware of the growing stack of booklets from NEMP in our staffroom, and our acquaintance with NEMP's work had, in part, influenced us in setting up a four year cycle of review and choosing to test children at Y4 and Y8.

### **3.2 NEMP or ARBs?**

However, for our first review using the new model (mathematics, 1999) we chose to use the NZCER's Assessment Resource Banks (ARBs). This was because the ARBs were being strongly promoted to schools at that time and some of our staff had used them in the classroom. The ARBs also seemed to offer more accessible test materials than NEMP.

While, on the whole, we considered our review of mathematics in 1999 as successful, the ARBs had some shortcomings for our purposes. They relied upon pencil-and-paper testing, which immediately disadvantaged students with poor reading and writing abilities and narrowed the range of knowledge and skills that may be assessed. They provided little guidance on how our students' achievement compared to others, apart from an indication of the degree of difficulty of each item for selected year levels.

Consequently, in all reviews since the beginning of 2000 we have used NEMP as the assessment tool for monitoring the progress and achievement of our students.

Our choice of NEMP was strongly influenced by its rationale, which closely mirrored the goals we established with our review process:

The main goal of national monitoring is to provide detailed information about what children know, think and can do, so that patterns of performance can be recognised, successes celebrated, and desirable changes to educational practices and resources identified and implemented. (Crooks & Flockton, 2003, p.2).

### **3.3 The Advantages of Using NEMP**

#### **Identifying Patterns of Performance**

Initially, the attraction of NEMP was the information it provided to identify ‘patterns of performance.’ We believed that if we could use NEMP tasks and replicate NEMP procedures we could generate data about what our students know, think and can do. We could then stand our data alongside NEMP’s and make some useful comparisons between the achievement of our students and students nationwide.

Since 2000 we have come to appreciate more fully the advantages of using NEMP to gather data for purposes of school-wide review.

#### **Diversity of Assessment Tasks**

NEMP satisfies the three criteria listed at the top of this section. Its tasks are diverse in their measurement of what children know, think and can do. NEMP tasks are seldom pencil-and-paper activities. Most are administered orally by teachers, or on video or computer (Crooks & Flockton, 2001, p.7). Children’s answers are mainly given orally or by demonstration (Browne & Hawe, 2004, p.47). This is true to some extent even when assessing reading and writing skills. NEMP’s testing of reading ability is conducted with a wide range of item types and assessment techniques, gathering valuable information about reading behaviours, attitudes and skills that cannot be gleaned from a paper-based test of reading comprehension. Additionally, NEMP testing enables an assessor to gather much peripheral knowledge about student learning through a high degree of one-to-one interaction between administrator and student, or observation of learner behaviour in peer groups.

## **Coverage**

NEMP monitors the entire curriculum and so provides a body of test resources and data across all essential learning areas and skills. This has been a significant factor in our decision to continue using NEMP to conduct school-wide monitoring since the introduction of newer, and in some ways more accessible, assessment tools such as asTTle and National Exemplars.

## **Four Year Cycles**

The cyclical and ongoing nature of NEMP mirrors schools' requirement to conduct ongoing self-review. As each four year cycle unfolds, and NEMP is now into its third, a new layer of data is collected and patterns of performance emerge. New tasks are constructed for each cycle, keeping the model fresh and responsive to new content in the curriculum, to new technology and new teaching techniques. Using NEMP enables us to keep our own review model and practices up to date.

Another appeal of the cyclical nature of NEMP is that it gives us confidence in maintaining an incremental review process at our school. NEMP's example demonstrates the worth of not attempting to do too much at once. Self-review is, in our experience, most effective when we target a couple of essential learning areas each year and a careful selection of achievement objectives and skills within each learning area.

NEMP's model, and our own small echo of it, fits research models of evolutionary school development (Joyce, Calhoun & Hopkins, 1999; Schaefer, 1997) because it "involves moving away from relatively isolated, highly targeted innovations intended to solve specific educational problems, and toward a fluid, continuous enquiry to make education better on a day to day basis" (Joyce, Calhoun & Hopkins, 1999, p.19).

Our aim in following a cyclical model of review is not to dismantle and rebuild our entire curriculum programme at any one time. Rather, like bricks in a wall, we survey a few at a time and replace or upgrade those that are in need of repair. The appearance of the wall doesn't change much from one year to the next, but over time the entire wall will be replaced. The process is both incremental and continuous.

### **NEMP Data is Highly Impartial**

Using NEMP to provide comparative data on student achievement offers an additional advantage, insofar as the data is relatively non-judgemental. Before the introduction of asTTle and National Exemplars there were few assessment resources that offered norm-referenced or criteria-referenced data for primary schools. Perhaps the only other way a primary school could answer the questions, “how well are my students doing compared to students in similar schools?” and “where are the gaps in my programmes - and what can I do about it?” was to actually swap assessment data with another school or among a group of schools.

We tried this in 2003, sharing written language samples of Y4 and Y8 students with another school of similar size and decile ranking. The process gave us a rare insight into the abilities of another group of students and the judgements of their teachers, but it was limited by the extent to which we were able to trust each other in a process of sharing that inevitably revealed weaknesses as well as strengths. Despite our partner school being outside our district the process was tainted by an inevitable sense of competition, a reluctance to place one's work under the spotlight of colleagues who, even at a distance, are nevertheless within the same networks. Breaking down these reservations may have been possible. We could have arranged for the staff of both schools to spend time together, to get to know each other and develop trust. But the benefit to cost ratio did not justify it.

Research by Timperley (2003, 2004) on a literacy project in South Auckland schools describes the practical difficulties of schools sharing assessment data. Interviews with 10 principals and deputy principals from schools that had worked closely together on the project revealed that no schools were at that time actually sharing data. Their

reasons were lack of trust, feelings of defensiveness and misunderstandings about the value of sharing information (Timperley, 2003, pp.17-18). Considering the competitive dimension of Tomorrow's Schools these responses are unsurprising.

By comparison, using NEMP data for benchmarking - to highlight strengths and weaknesses – is a low-stakes activity because the data is anonymous and the process can be conducted within a single school.

### **Access to NEMP Data and Tasks**

NEMP data is easily accessible through the reports sent to all schools annually. In recent years NEMP Probe studies have added a second layer of analysis and interpretation of NEMP data, offering further opportunities for teachers and managers to use the data in ways that add meaning to school-wide review processes.

The data published in NEMP booklets shows results for the entire test group sampled by NEMP. It is not possible from this data to make comparisons with schools of similar decile ranking, or comparisons with specific groups such as Maori or Pasifika students, boys and girls or ESOL students. Data on these groups is analysed separately by NEMP and statements about the performance of these groups are included in the reports. At times we have felt our review process would be strengthened if we could compare our students' achievement against NEMP data from schools with similar decile ranking, or schools of a similar type (small urban centre). NEMP's directors are considering including some of this data in future reports.

Access to NEMP tasks was initially challenging. Although the tasks are described in some detail in the reports, the materials that accompany the tasks are often quite specialised and difficult to replicate. Over the years we have used a range of strategies to overcome this problem. We often select tasks that require relatively few materials or where we can make or supply the materials ourselves without too much trouble. NEMP staff have been tremendously helpful in supplying materials, especially videos and computer software. We have allowed ourselves some latitude in how closely we replicate NEMP materials. For our purposes we feel accuracy is not

compromised too much if, say, we replace a NEMP photograph with one of our own that illustrates the same point.

In the past couple of years NEMP has made a range of its tasks available as Access Tasks. Access Tasks are marketed through the NZCER, although up to now they have not been widely advertised. Some task materials can also be downloaded from the NEMP website.

# Chapter Four: Using the Model – A Generalised Review

## Key Points

- The review and development of a curriculum area covers four school terms.
- Curriculum committees manage the review process, with support from a curriculum review manager.
- A continuous review process operates as an ongoing action research project, with unexpected outcomes and dynamic procedures.
- Ongoing self-review has improved the level of professional discourse among staff.

In section two the three elements of the model – review, development and monitoring – were introduced. This section describes a generalised example of how the model works at Ashburton Borough School. The following two sections illustrate the model at work in specific curriculum reviews.

## 4.1 Personnel and Processes

Table Four illustrates a typical review, detailing the personnel involved and their functions. The table covers the four school terms of a complete review and development cycle for one curriculum area (see Table One).

**Table Four: A Generalised Review at Ashburton Borough School**

	<b>Curriculum Committee (CC)</b>	<b>Curriculum Review Manager (CRM)</b>	<b>Staff</b>
<b>Term One</b>	<ul style="list-style-type: none"> <li>• Revisit activities and goals from previous review of this subject</li> <li>• Consult with CRM on focus areas for subject testing</li> <li>• Decide what information is needed and how this will be obtained</li> <li>• Design and administer staff survey</li> <li>• Begin auditing resources and gathering other information as decided</li> <li>• Confirm budget with principal</li> </ul>	<ul style="list-style-type: none"> <li>• Revisit activities and recommendations from the previous review of this subject</li> <li>• Consult with CC on focus areas for testing</li> <li>• Review NEMP booklets and select NEMP tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Complete staff survey and provide other information to CC as requested</li> </ul>
<b>Term Two</b>	<ul style="list-style-type: none"> <li>• Analyse staff surveys and other information</li> <li>• Consider CRM's report and recommendations</li> <li>• Set staff development goals and plan staff development (PD)</li> <li>• Review curriculum programme for this subject</li> </ul>	<ul style="list-style-type: none"> <li>• Gather resources for testing using NEMP</li> <li>• Conduct testing</li> <li>• Analyse results of testing and write report with recommendations to CC</li> <li>• Consult with CC on report as necessary</li> </ul>	<ul style="list-style-type: none"> <li>• Provide additional information to CC as required</li> <li>• Y4 and Y8 teachers select children for testing</li> <li>• Some staff may help conduct testing</li> </ul>
<b>Term Three</b>	<ul style="list-style-type: none"> <li>• Organise and lead staff PD</li> <li>• Above may include liaising and planning with external providers</li> <li>• Begin re-writing curriculum programme</li> </ul>	<ul style="list-style-type: none"> <li>• Report to Principal/BOT</li> <li>• Assist with PD as required</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in PD activities</li> <li>• Lead PD if required</li> <li>• Review curriculum and classroom programmes in area groups</li> </ul>
<b>Term Four</b>	<ul style="list-style-type: none"> <li>• Complete staff PD</li> <li>• Complete re-write of curriculum programme</li> <li>• Purchase new resources as required</li> <li>• Report to Principal/BOT</li> </ul>		<ul style="list-style-type: none"> <li>• Complete PD activities</li> <li>• Area groups consider new curriculum programme and adjust planning and teaching as necessary</li> </ul>

## **Importance of the Curriculum Committee**

Table Four highlights the importance of the curriculum committee (CC) in managing the review and development process. At Ashburton Borough School curriculum committees normally comprise 4-6 staff. These are almost always teachers, although some teacher aides and specialist staff are members of committees for special education, library and ICT. With a teaching staff of 18 (which includes four staff who jobshare to fill two fulltime teaching positions) each teacher is assigned to two, occasionally three, curriculum committees. Part-time teachers generally work on only one committee, depending on the size of their job.

Membership of committees is arranged to try and avoid a teacher being engaged in two committees reviewing and developing subject areas in any one year. Likewise, membership of curriculum committees remains as constant as possible from one year to the next. Curriculum committees are often not led by management staff, for purposes of spreading ownership of data and of the review process itself. This strategy is also an opportunity to build leadership capacity in the school.

In term one the curriculum committee sets the focus of the review, by reconsidering earlier reviews of their subject and consulting with the Curriculum Review Manager and staff. Usually the curriculum committee prepares a staff survey. The survey seeks information on;

- strengths and weaknesses in the teaching of the subject under review
- comments about the adequacy of resources
- suggestions for professional development focus
- information about student achievement.

The curriculum committee may gather more information to inform the review: for example, they may consider new programmes and initiatives from the MOE and other agencies, review literature and seek input from schools that are running innovative programmes in this subject.

## **Curriculum Review Manager**

Assessing student achievement using NEMP is the responsibility of the Curriculum Review Manager (CRM). As shown in Table Four this work is conducted over the first two terms of the review process. Remember, the main purpose for NEMP testing is to identify areas of weakness that can become the focus for staff professional development. To enable this testing must be completed and the results reported to the curriculum committee by the second half of term two, to give the committee time to organise a PD programme for terms three and four and liaise with trainers. This is often the most challenging part of a review, as most trainers (such as College of Education Advisory Service staff or other educational consultants) are unused to schools coming to them with highly specific PD goals. This is discussed further in section 7.

The CRM's work is virtually completed by the end of term two, with only minor follow up by way of reporting to principal/BOT and perhaps assisting with PD planning and delivery. By the beginning of term three the CRM needs to be free to begin the testing process for the next curriculum area in the review cycle.

## **Curriculum Manager**

Prior to 2002 the CRM also had responsibility to support curriculum committees and guide the review process. We considered this necessary to maintain the quality of the model from one review to the next during the first cycle, when most staff were inexperienced in using it. In 2002 the management of curriculum and review was split. The CRM remained responsible for NEMP testing while a new position of Curriculum Manager (CM) assumed the role of guiding the work of the curriculum committees. The two salary units allocated to curriculum review were split between the two designations (see Table Three). In addition to working with the two curriculum committees reviewing and developing learning areas at any one time, the CM is also responsible for overseeing the work of remaining curriculum committees and reporting their progress to the principal/BOT.

## **The Roles of Other Staff**

During the course of a review there are various points at which all staff are involved. All participate in professional development (PD) activities (including support staff where appropriate). In line with theories about how to conduct effective PD (Zachary, 2000; Leithwood & Louis, 1998; Timperley, 2003) we tend to focus on whole-staff PD. Staff sometimes lead PD workshops, using expertise gained through practice, specialist training or personal interest. Our PD activities tend to be highly interactive, expecting all staff to contribute by discussing their teaching practice and confronting new ideas.

In addition to PD activities staff will participate in the review process through their areas. Each area considers how changes to planning and curriculum delivery instigated by the review will be implemented in their part of the school.

## **4.2 Monitoring: The Third Phase of the Model**

The monitoring phase of the model is not included in Table Four. Monitoring continues during the three years of the cycle when a curriculum area is not being reviewed and developed. Monitoring mainly involves curriculum committees overseeing the progress of their curriculum area. This will include:

- managing an annual curriculum budget (participating in budget-setting, determining spending goals and reporting annually to the principal)
- maintaining and upgrading resources (books, equipment and consumable resources, such as science materials)
- monitoring progress of teachers and students in achieving goals established through review and supporting these where necessary (for example, by organising additional professional development for individuals or groups)
- responding to initiatives from central agencies or elsewhere (for example, the maths committee's work on the Numeracy Development Project in recent years)

promoting their curriculum area within the school and community (for example, organising book week, setting up displays of students' work, assisting with the school musical production).

### 4.3 The Challenge of Improving Student Learning

Ultimately, the success of a school's review model is measured in a single standard: does it improve student learning?

#### Comparing Two Review Models

When we developed the model we thought putting it into practice would be fairly straightforward. After all, it was based on similar models described in current research. This is illustrated in Table Five, which aligns our model with another developed by Joyce, Calhoun & Hopkins (1999).

**Table Five: Two Models of Self Review**

<b>Joyce, Calhoun &amp; Hopkins (1999)</b>	<b>Ashburton Borough School (1999)</b>
Staff gather information about student performance.	Data gathered through NEMP testing. Identify areas of focus.
Staff study information about how the learning environment in its school supports student development in the focus area.	Survey staff, audit resources, consult with students, BOT and community.
Staff study information from the external knowledge base about how students develop in the focus area.	Engage external providers of PD. Revise school programme with reference to current literature, resources and programmes.
Teachers select actions that can be implemented immediately and actions that can be implemented over time to improve the learning environment.	Review school programmes. Prioritise areas of focus. Implement changes and plan for monitoring and review of these.

Essentially, in 1999 we believed we could gather information about student achievement, compare it with NEMP results, identify gaps and fix them with professional development activities. We thought it would then be a simple process of monitoring the results and adjusting our initiatives.

## **Effective Review is Complex**

In reality, our experiences since 1999 have taught us that effective school review is a much more complex, subtle and at times frustrating process. Even the relatively simple procedures of gathering and analysing data throw up challenges that, if left unanswered, can grow like weeds in an untended garden. Perhaps the greatest discovery we have made is that by embarking on a journey of continuous self-review we set in motion an ongoing action research project that has all sorts of outcomes; personal and professional, individual and collective, many of which cannot be foreseen at the start of the journey.

Our process echoes spiral models of action research (Kemmis & McTaggart, 1988; Piggot-Irvine, 2005) that incorporate elements of planning, acting, reflecting and observing. At each turn of the spiral new, and sometimes unexpected, influences reshape the process. These may include our own data from our latest reviews, data generated from outside our school, new staff, existing staff assuming new roles, changes to our student profile, changes in our community.

Accordingly, the outcomes of our process are rarely constant. Sometimes we feel we are treading water. At other times a small influence – for example, a single piece of data – can generate tremendous discussion and lead to considerable change and growth. As Piggot-Irvine (2005) puts it, the action research model works because it is “context-based, collaborative, translates theory into action, and is improvement focused” (p.11).

## **Improving Professional Discourse**

Perhaps the most striking outcome for us has been the extent to which self-review has improved the level of professional discourse among staff. In the face of well-

grounded data we confront our shortcomings and our successes (the latter, for some, may be more unnerving). An important measure of the success of the model are the ongoing debates and discussions about programmes and their delivery, the quest for professional development to meet tightly-focused goals, the personal challenges of becoming better teachers across the whole curriculum. As we have become more adept at using the model its effects spin off into other management processes - appraisal, reporting, budgeting.

And so, while the ultimate goal remains enhanced student learning, many other positive outcomes have happened along the way. Joyce, Calhoun & Hopkins (1999) capture this dynamic when they state:

The primary goal of evolutionary school improvement is enhanced student learning; however, a healthier workplace for adults often evolves...In terms of benefits for the adult community and the culture of the school, over time, the continuous collective study of the learners and the learning environment becomes part of the work norms of a school and reduces the feeling of isolation or loneliness in supporting student development (p.81).

# Chapter Five: Reviewing Mathematics Using NEMP

## Key Points

- Our 1999 mathematics review identified fractions, telling time and interpreting graphs as weaknesses in our programmes at both Y4 and Y8.
- The desire to replicate NEMP procedures and materials as closely as possible is an important factor in our choice of tasks.
- Testing is conducted with a sample of Y4 and Y8 students, comprising about 30% of total numbers in each year level and representing a cross-section of ability.
- Ashburton Borough School test results are compared to NEMP results.
- Our main use of the test data is to generate discussion about student achievement among staff, leading to carefully-focused professional development activities.

Mathematics was the first essential learning area reviewed using the model we developed at Ashburton Borough School in 1999. The review phase was conducted in terms three and four, 1999, the development phase took place in terms one and two, 2000 (Table One).

## 5.1 The 1999 Review

As noted in part three, our testing of mathematics programmes in 1999 was conducted with test items from the ARBs. In that year we established the convention of testing Y4 and Y8 students, modelling this part of our process on NEMP. Testing was conducted with 18 Y4 students and 11 Y8 students, representing a sample of around 50% of the total number of students in each year. Students were selected by choosing

every second child from an alphabetical list of all students in each year.<sup>2</sup> The Y4 test comprised 17 items, the Y8 test comprised 11 items.

Test items covered number, geometry and measurement strands of the mathematics curriculum. In establishing the review model we decided to test only selected parts of each curriculum area to gain the maximum benefit from the limited time and resources available for our review programme. In deciding which parts of each curriculum to test we are guided by:

- teacher surveys and classroom assessment data, which often throw up areas of concern
- a desire to revisit parts of a curriculum previously tested (now that we are into our second four year cycle) to measure the effects of staff development programmes
- initiatives from outside the school, such as MOE professional development opportunities
- comments made by ERO about our programmes
- feedback from parents, BOT and community.

In 1999 we analysed our test data by comparing the average scores of our students with the total possible scores for each test item. We noted several items where the average scores of our students were significantly lower (50% or less) than the total possible score. Specifically, we identified fractions, telling time and interpreting graphs as weaknesses in our programmes at both Y4 and Y8. We then planned and conducted staff professional development in these specific areas, according to the guidelines in our model of self-review.

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<sup>2</sup> Since we established our review programme we have sometimes been concerned that our selection of students for testing does not apply sufficiently rigorous random sampling techniques to assemble groups of students representing a true cross-section of abilities. Mostly, the selection of students is left to teachers, who are asked to select a group that reflects the range of abilities in the subject area under review. A recent conversation with Terry Crooks endorsed this method. In his view the number of students in a single school is too small for random sampling methods to be any more accurate than relying on teacher judgement. There remains, of course, a slight risk that teachers will 'stack' the sample group with able students. This risk is reduced by having the curriculum manager cross-check the sample, and by the high level of ownership of the review process by teachers.

## 5.2 The 2003 Review

### Selecting NEMP Tasks

In 2003 we revisited mathematics at the beginning of our second review cycle. By this time we had been using NEMP to test student achievement since 2000. We selected 8 tasks from NEMP's 2001 assessment of mathematics. Six were trend tasks, having been used by NEMP in 1997 and again in 2001, enabling them to comment on patterns of performance. Using trend tasks also allowed us to place our students' achievement within the patterns, although we could not yet identify our own trends because of limitations in comparing our 1999, ARB-generated data, with data obtained from using NEMP. For our 2003 testing we selected 12 students from Y4 and 12 from Y8, representing about 30% of all students in those years.

In 2003 the mathematics curriculum committee decided to monitor some of the same areas we had identified as weaknesses in our 1999 review. We were eager to measure the effectiveness of our model by finding out if our professional development in teaching fractions and time had appeared to have an effect on student achievement. To that end, three of the eight tasks assessed fractions and three assessed time. One task assessed number skills of Y4 students and another assessed measurement skills among Y4 and Y8 students. Table Six lists the tasks used.

**Table Six: NEMP Tasks Used in 2003 Mathematics Monitoring**

<b>Task</b>	<b>Name</b>	<b>NEMP Ref.</b>	<b>Content</b>	<b>Group</b>
1	Pizza Pieces	2001, p.15	Understanding fractions	Y4 and Y8
2	Girls and Boys	2001, p.16	Solving number problems	Y4 only
3	Equivalents	2001, p.16	Converting fractions	Y8 only
4	Fractions	2001, p.20	Calculating with fractions	Y4 and Y8
5	Measures	2001, p.29	Estimating and measuring	Y4 and Y8
6	Video Recorder	2001, p.31	Relating time to 24 hour clock	Y4 and Y8
7	What's the Time?	2001, p.34	Analogue and digital clocks	Y4 only
8	Running Records	2001, p.40	Comparing times	Y8 only

## **Using One-To-One and Independent Tasks**

Our desire to replicate NEMP procedures and materials as closely as possible is an important factor in our choice of tasks. NEMP commonly uses four approaches to testing: one-to-one interviews, stations, teams and independent (Crooks & Flockton, 2001, p.7). We usually select tasks that are administered using one-to-one or independent approaches. Time is an important factor in our selection. Whereas NEMP testers usually work with a group of students for several days we conduct our testing in one full day or two half days. If we selected team or station activities the amount of time needed to set up and explain the activities would hardly justify the results. Team and station activities also tend to require more specialised equipment, videos and computer programmes that are difficult to access or duplicate. A further consideration is that with our small numbers we could only set up a few teams (NEMP team tasks use teams of four students) which would give us insufficient data to make useful comparisons with NEMP results.

In our 2003 review of mathematics three tasks (Pizza Pieces, Girls and Boys, Measures) used the one-to-one interview approach and five were independent. Independent tasks all required children to read a simple instruction or view pictures or data, and record their response on paper.

## **Videotaping Tests**

Unlike NEMP we do not videotape any of our testing. Again, this is partly a limitation of time and resources but, more importantly, because the people who conduct our testing are generally the same people who analyse the data and write the reports we believe we obtain sufficient additional information about student behaviours, interesting or unusual responses and deviations from standard lines of questioning or prompting simply through the interview process. To this extent we have more control over our testing process than the organisers of NEMP.

## **Gathering Resources**

Prior to conducting NEMP testing in our school the curriculum review manager gathers all necessary resources. Usually NEMP sends us copies of their resources. Sometimes we use alternative resources when we think it will not significantly affect the accuracy of our testing. For example, with the mathematics test item Pizza Pieces, we replaced the pictures of the two pizzas used by NEMP with large paper circles coloured red and white and cut into the same fractions as the NEMP pictures. Our students were instructed that the paper circles represented pizzas and during testing the instructor referred to them as the 'white' pizza and the 'red' pizza.

Occasionally we misjudge the effect of using different resources. For example, in the test item What's the Time? Y4 students were asked to identify two clock faces that showed the same time in a picture showing six different clocks, including analogue and digital displays. In our version we replaced three of the six clocks. 92% of our students answered the question correctly, compared to just 38% of NEMP students tested in 2001. It is possible that our Y4 students are simply very good at telling the time, but the more likely conclusion is that our version of the question was easier to answer.

The availability of some NEMP tasks as Access Tasks should largely overcome problems of resourcing.

## **Preparing Marking Sheets**

The curriculum review manager also prepares marking sheets for recording students' answers. Table Seven is an example of a marking sheet from the 2003 mathematics review.

**Table Seven: Marking Sheet for Task Two, Girls and Boys**

	1	2	3	4	5	6	7	8
1. Arranged 2 tens rods and 6 ones cubes								
2. Yes, initially								
3. Yes, after prompt								
4. Arranged 2 groups of 1 tens rod and 3 cubes								
5. 13								
6. Arranged 3 tens rods and 2 cubes								
7. Arranged 2 tens rods and 12 cubes								
8. Yes, initially								
9. Yes, after prompt								
10. Arranged 2 groups of 1 tens rod and 6 cubes								
11. 16								

The instructions on the marking sheet are the correct answers or variations of these as described in the NEMP booklets. The numbers along the top of the table are student numbers. When each student arrives to be tested he/she is given a label with a number on it and all results for that child are recorded against the number. Not only is this convenient for recording purposes, it also helps the child understand that this is not an ‘exam’, that the child’s individual results will not be recorded as personal assessment data for reporting purposes.<sup>3</sup> Consequently, we hope, the child feels more relaxed and better able to demonstrate his/her real ability.

The task shown in Table Seven was administered using the one-to-one interview approach. The tester simply recorded each correct answer on the marking sheet. In this task Y4 children were asked to represent the number of boys and girls in a school class using rods and cubes. For example, question one required the child to show the number 26, using two rods and six cubes, while question two asked if it was possible that there could be the same number of girls as boys in a class of 26 students.

Table Eight shows the marking sheet prepared for a task administered using the independent approach.

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<sup>3</sup> From time to time interesting or unusual individual results are noted and appear in the final report to the curriculum committee and principal. They may also be discussed with the child’s teacher or parent/caregiver, particularly if they demonstrate levels of performance well beyond the norm for that child.

**Table Eight: Answer Sheet for Task Three, Equivalents**

	<b>Fraction</b>	<b>Percentage</b>	<b>Decimal</b>
<b>1</b>	$\frac{1}{2}$		
<b>2</b>		<b>20%</b>	
<b>3</b>			<b>0.4</b>
<b>4</b>	$\frac{1}{4}$		
<b>5</b>			<b>0.1</b>
<b>6</b>		<b>75%</b>	

For this task Y8 students were given a table displaying a range of fractions, percentages and decimals. Each student recorded his/her student number on the sheet and filled in the remaining boxes with the equivalents to the fraction, percentage or decimal shown for each of six problems.

### **Administering the Tests**

When we test children we follow as closely as possible the instructions published in NEMP booklets. Variations in instructor behaviour, such as prompting or wait time, can be analysed by NEMP staff watching video recordings of testing. Because we do not video our tests we expect our administrators to strictly follow NEMP written instructions.

Tests are administered at Ashburton Borough School by staff and parent helpers, some of whom have worked with us on several reviews and are now highly skilled at NEMP testing. Sometimes selected Y8 students help administer tests to Y4 students. In the 2003 mathematics tests the administration was relatively straightforward, given the number of independent tasks, and one person was able to complete the testing over two mornings. Usually we have two or three people testing.

### **Collating Test Results**

When testing is completed the curriculum review manager marks the tests, converts results to percentages and collates them in tables that compare Ashburton Borough

Results with NEMP results. Collated results for task two, Girls and Boys, and task three, Equivalentents, are shown in this report.

Table Nine shows the collated results for Task Two, Girls and Boys.

**Table Nine: Results for Task Two, Girls and Boys (%)**

Question	NEMP 1997	NEMP 2001	Borough 2003
1	89	92	100
2	63	70	75
3	10	8	17
4	76	79	100
5	73	80	100
6	88	91	92
7	4	3	8
8	49	56	67
9	8	6	8
10	43	55	83
11	46	61	75

In this table the questions are those shown in Table Seven. Thus, 100% of Borough Y4 students correctly answered question one, which asked them to show the number 26 using rods and cubes (see Table Seven). This compared to 89% of NEMP students in 1997 and 92% of NEMP students in 2001. In question two, which asked if there could be the same number of boys as girls in the class, 75% of Ashburton Borough students said yes, initially, and a further 17% answered correctly when prompted to explain an initial negative answer. This also compared favourably to NEMP results.

Table Ten shows the collated results of Ashburton Borough students for Task Three, Equivalentents.

In this task 92% of Ashburton Borough Y8 students were able to correctly identify the equivalent percentage and decimal for the fraction  $\frac{1}{2}$  in question one, 100% identified the equivalent percentage for the decimal 0.4 in question three but only 58% correctly identified the equivalent fraction in question three.

**Table Ten: Marking Sheet for Task Three, Equivalents**

	<b>Fraction</b>	<b>Percentage</b>	<b>Decimal</b>
<b>1</b>		<b>92%</b>	<b>92%</b>
<b>2</b>	<b>75%</b>		<b>92%</b>
<b>3</b>	<b>58%</b>	<b>100%</b>	
<b>4</b>		<b>92%</b>	<b>92%</b>
<b>5</b>	<b>83%</b>	<b>92%</b>	
<b>6</b>	<b>83%</b>		<b>75%</b>

Table Eleven compares the results between Ashburton Borough students and NEMP students for Task Three.

**Table Eleven: Results for Task Three, Equivalents (%)**

<b>Question</b>	<b>NEMP 1997</b>	<b>NEMP 2001</b>	<b>Borough 2003</b>
1	77	79	92
2	65	67	92
3	50	53	75
4	61	69	92
5	31	35	58
6	59	64	100
7	56	59	92
8	44	52	92
9	47	51	83
10	61	63	92
11	54	57	83
12	58	63	75

In Table Eleven the question numbers refer to each separate answer in Task Three. Question one is the percentage equivalent for the fraction  $\frac{1}{2}$ , question two the decimal equivalent for  $\frac{1}{2}$ , and so on. In this task the results for Ashburton Borough students in all questions are higher, sometimes considerably so, than NEMP results.

Test results are usually also graphed for better interpretation of comparisons and trends.

## **5.3 Using Test Results**

### **Comparisons with NEMP Results**

Having prepared the data in tabular and graph form the curriculum review manager writes a report that describes the monitoring process. In addition to the graphs and tables the report includes descriptions of the test items, comments from NEMP reports about significant trends or results and a brief analysis of each task, along the lines of the short comments that accompany task results in the NEMP reports. For example, our report's comment on task two, Girls and Boys is:

“Ashburton Borough Students show more success than NEMP students in all sections of this task, though in some cases the advantage is too small to be significant. Borough students show particular strength in renaming from tens to ones (question ten), which was the most challenging part of the task.”

Comparisons between NEMP results and Ashburton Borough results are obviously limited by the very small sample size of Borough students compared to NEMP, and by the challenges of replicating NEMP testing procedures and resources. Because of this we generally do not use our test results to make comments about overall levels of student achievement in the school. The primary purpose of our review model is to identify results that may point to significant strengths or gaps in our teaching and learning programmes, and to use this information to plan staff PD programmes. To this end, variations of around 20% or more between Ashburton Borough and NEMP results usually become the focus for discussion.

### **Using Data to Generate Discussion**

The curriculum review manager's report highlights the variations and offers a range of comments and questions designed to initiate discussion of the results by the curriculum committee and, later, the whole staff. The report of our 2003 mathematics monitoring mentions some specific areas where Ashburton Borough students seem to be performing significantly better than students nationwide. The report offers the view that, on the face of these results, we should have some confidence in our review

process, insofar as some of the gaps we identified in 1999 (in our teaching of equivalent fractions, for example) now appear to be strengths among our students. We can reasonably assume that this is at least partly due to our PD in these areas.

The curriculum review manager offers questions to guide the curriculum committee in its discussions about what PD it may plan for mathematics.

- What, given the absence of any glaring gaps in our results compared to NEMP, do we consider is an acceptable level of performance for our students?
- As a decile 8 school are we happy to be about the same as, or a few percent better than, NEMP results?
- Given the absence of obvious gaps thrown up in our testing what other information gathered in the review process can we use to direct our decision-making about future development of our mathematics programmes?
- Can we be guided by comments in the NEMP report on their perceptions of weaknesses in mathematics programmes, especially in estimating and problem-solving skills (Crooks & Flockton, 2001, p.3)?

How this information is used by curriculum committees has been introduced in part four and is discussed further in part seven. Some of the challenges to the collection and analysis of data are reviewed in part eight.

# Chapter Six: Reviewing Social Studies Using NEMP

## Key Points

- Selection of NEMP tasks for the social studies review was influenced by teacher frustration about the social studies curriculum and by comments in NEMP reports about weaknesses among New Zealand students.
- Twenty-four students were tested using seven NEMP tasks.
- The review catalysed debate about the purpose and content of our school social studies programmes.
- The social studies review confirmed the power of data to facilitate meaningful change.
- Teachers felt they owned the process.

Social studies was first reviewed at Ashburton Borough School using NEMP in terms one and two, 2003, and developed in terms three and four (Table One). It was the last curriculum area to be reviewed within the first four year cycle of the review programme established in 1999. By 2003 we were familiar with the model and confident of the extent to which we could use it to challenge our ideas and practice. A further impetus to challenge was provided in 2003 by the announcement from the Ministry of Education of a major review of the national curriculum. In this climate our review of social studies became a significant point of growth within our school.

## 6.1 Preparation

### Selecting Focus Areas

In selecting areas of focus for the review the curriculum manager was guided by staff responses to a survey of social studies conducted by the social studies curriculum

committee. Some staff expressed frustration about the breadth of achievement objectives in the 1997 social studies curriculum document. Staff felt the expectation that achievement objectives from all five strands and three processes should be covered at each curriculum level left us teaching too many achievement objectives with too little effect.

### **Focus Areas Influenced by Comments in NEMP Reports**

The selection of areas of focus for our review was also influenced by comments in the NEMP reports of social studies reviews in 1997 and 2001. NEMP noted that students in both Y4 and Y8 scored poorly in many tasks relating to Culture & Heritage and Place & Environment strands (Flockton & Crooks, 2001, p.3). In particular, they raised the concern that students “showed quite limited knowledge and understanding of the Treaty of Waitangi and early New Zealand history.” Students also, according to NEMP’s findings, demonstrated poor knowledge of New Zealand and Pacific geography, a poor grasp of the importance of cultural traditions for immigrants and had few ideas about important features of New Zealand culture. Students in both year 4 and year 8 “displayed major gaps in their knowledge of key information about New Zealand and the world” (Flockton & Crooks, 1997, p.5).

### **Selecting Tasks**

We decided to test our students’ knowledge and understanding of these features of social studies using seven tasks. Five tasks were taken from the 2001 NEMP report of social studies, one from the 1997 social studies report and one from the 2005 report on graphs, tables and maps. These are shown in Table Twelve.

Tasks one, two and three investigated students’ knowledge, understandings and processes in the culture and heritage strand of the social studies curriculum. Task four focused on the place and environment strand and task five on time, continuity and change.

**Table Twelve: NEMP Items Used in 2003 Social Studies Monitoring**

<b>Task</b>	<b>Name</b>	<b>NEMP Ref.</b>	<b>Focus</b>	<b>Level</b>
1	Treaty	SS 2001 p.28	Treaty Of Waitangi	Y4 and Y8
2	Aotearoa	SS 2001 p.29	Naming of Aotearoa/NZ	Y4 and Y8
3	Mrs Chia and Eileen	SS 2001 p. 35	Sustaining culture and heritage	Y8 only
4	Knowing NZ	SS 2001 p.39	Knowledge about New Zealand	Y4 and Y8
5A	Timeline	SS 2001 p.50	Historical events and dates	Y4 only
5B	Timeline	SS 2001 p.51	Historical events and dates	Y8 only
6	Map Key	GTM*1999 p.46	Interpreting symbols on maps	Y4 only
7	Where in the World	SS 1997 p.40	Sketching a map of NZ	Y4 and Y8

\* Graphs, Tables and Maps

Task five was administered in two formats, the Y8 version containing more components than the Y4 version. Task seven was one of a group of tasks used by NEMP in 1997 to assess students' "knowledge about the main settings identified in the (social studies) framework" (Flockton & Crooks, 1997, p.4). We included tasks six and seven to investigate our students' knowledge of key information about New Zealand and their practical skills for finding and interpreting information from maps.

Tasks one, four and five were NEMP trend tasks, used in both their 1997 and 2001 reviews of social studies, and published in the report of the 2001 review.

## **6.2 Administration**

Tasks were administered one-to-one, except for task four, Knowing New Zealand, and task six, Map Key, which children completed independently. Testing was conducted with 12 Y4 and 12 Y8 children, representing about 25% of total student numbers in these year groups. As usual, students were selected by teachers to represent a cross-section of abilities in social studies. Testing was administered by a teacher and a parent (who is also a trainee teacher). Most of the testing was completed in a single day with some extra testing conducted by the curriculum review manager on the following day.

Resources for testing were relatively easy to copy or reproduce. Tasks six and seven are published in a box set, *Teachers' Choice of NEMP Tasks*, by the Unit for Studies in Educational Evaluation, University of Canterbury, and distributed widely among schools. For task seven, which required children to draw a map of New Zealand from memory and place their home town on the map, several exemplars of NEMP results were provided, which greatly assisted our marking. For task three, Mrs Chia and Eileen, the main resource used by NEMP testers was a colour photo of a Chinese woman with her baby. We replaced this with a photo of an Indian couple and their daughter, and revised the script for administering this task accordingly.

Children's responses were recorded and collated using marking sheets similar to those described in the previous section of this report.

### **6.3 Collating Test Results**

As usual, we found close alignment between NEMP results and our own. Collated results for task one, Treaty, and task five, Timeline, are shown in this report, with discussion of comparisons between Ashburton Borough School results and NEMP results.

#### **Task One, Treaty**

Table Thirteen shows results for task one, Treaty. In this task children were shown a photograph of the signing of the Treaty of Waitangi and were asked when they thought the ceremony took place, who the main parties were and why the Treaty was, and is, important. They were also asked to explain what they think a treaty is.

**Table Thirteen: Results for Task One, Treaty (%)**

Question	Year 4		Year 8	
	NEMP	Borough	NEMP	Borough
	2001	2003	2001	2003
<b>1. What a treaty is</b>				
Clear explanation	6	0	38	30
Vague Notion	10	0	28	50
<b>2. When Treaty of Waitangi was signed</b>				
1840 or 163 years ago or similar	0	0	11	90
150-165 years ago or similar	3	0	8	0
Vague but some idea	18	10	28	10
<b>3. Who the people were</b>				
a) Maori chiefs	12	20	38	90
Maori	70	40	52	0
b) Representatives of the Queen	1	10	13	90
Soldiers	26	20	18	0
<b>4. Where the Europeans came from</b>				
England or similar	52	50	82	90
<b>5 and 6. What the Treaty is about</b>				
Very comprehensive and knowledgeable	0	0	2	10
Moderate comp. and knowledge	3	0	17	20
A little comp. and knowledge	25	10	47	60
<b>7. Why is the Treaty important today?</b>				
Very comprehensive and knowledgeable	0	0	1	0
Moderate comp. and knowledge	2	0	8	30
A little comp. and knowledge	15	40	41	40

This was one of the areas of NEMP's 2001 review where students scored poorly, and our results were similar. None of our Y4 students was able to describe what a treaty is. Few of our Y4 students offered a reason why the Treaty of Waitangi is important today.

There were, however, a few striking differences in the Y8 results. In question two, 90% of our Y8 students successfully identified when the Treaty was signed. In questions three and four, 90% of our Y8 students identified who the main representatives were and which country the Queen's representatives came from. In

question seven, 30% of our Y8 students were judged to have a ‘moderate’ understanding of the relevance of the Treaty today, compared to only 8% of NEMP students. This last result needs to be treated cautiously because, without access to NEMP’s marking schedule, we cannot confidently say that our interpretation of ‘moderate’ matches NEMP’s. Strong results from our Y8 students in this task may have been a matter of timing, with students having recently completed a study of the Treaty of Waitangi prior to the testing.

## Task Five, Timeline

Table Fourteen shows the collated Y4 results for task five, Timeline. Y8 students received a slightly more complex version of this task.

**Table Fourteen: Results for Task Five, Timeline (Year 4 only) %**

Question	Results	
	NEMP 2001	Borough 2003
<b>1. Putting Pictures in Order</b>		
Maori explorers first	49	90
Capt. Cook before Treaty of Waitangi	61	70
Tr. Of Waitangi before votes for women	54	80
Votes for women before WW1	34	0
Hillary climbing Everest after others	67	70
<b>2. Dating three of the pictures</b>		
Three dates in correct order	54	0
1769 used for Capt. Cook	25	30
1840 used for Tr. of Waitangi	18	0
1914 used for WW1	23	20
<b>3. Explaining Important Events</b>		
<b>Captain Cook:</b>		
Good clear answer	3	10
Basic Answer	10	30
<b>First Maori explorers</b>		
Good clear answer	4	0
Basic Answer	25	20
<b>Votes for Women</b>		
Good clear answer	1	0
Basic Answer	15	20

In this task children were shown six photographs of major events in New Zealand history: the arrival of Maori explorers, the arrival of Captain Cook, the signing of the Treaty of Waitangi, granting of votes for women, the outbreak of World War 1 and Hillary's ascent of Mount Everest. Children were asked to sort these into their preferred chronological order. They were then given three cards with dates, which they had to place beside the correct photographs. The dates were 1769 (Captain Cook's visit to New Zealand), 1840 (signing of the Treaty of Waitangi) and 1914 (outbreak of World War One).

Generally our Y4 students scored better than NEMP students in putting the pictures in order. On the other hand none of our Y4 students was able to place the three date cards correctly in question two, compared to 54% of NEMP students. Results for question three were similar between Borough students and NEMP, with both groups recording low scores.

Our report notes that while our Y4 students were eager to do the task they seemed genuinely puzzled about what was expected of them. This was particularly evident when placing the date cards. Our administrator noted "the date cards in task five seemed to mean nothing to many of the children. I wondered if they could even read the numbers, much less attach meaning to them. Their placement of the cards was done almost at random. Correct matchups were more a matter of chance than purpose."

The comment above highlights the way unforeseen problems can arise during testing. Clearly our Y4 children's number knowledge became an important limiting factor in their ability to answer question two. Significantly, this appeared to be less of a problem for children tested by NEMP. This result, highlighted in the review manager's report, stimulated staff discussions about links between numeracy and social studies, especially the importance of sequencing, place value and number lines.

## **Significant Results From Other Tasks**

The curriculum review manager's report to the principal and social studies curriculum committee noted the results described above, plus several others.

For example, in task seven, Where in the World, our Y4 students were better at drawing all three main islands of New Zealand (90%) compared to NEMP students (50%). In task three, Mrs Chia and Eileen, our Y8 students were better able to identify knowledge of history as an important way to learn about culture (50% compared to 13% for NEMP).

Borough students also displayed some further weaknesses. In task three only 10% of our Y8 students identified family and relatives as a source for learning about one's culture, compared to 78% of NEMP students. None of our students identified knowledge of Maori language or Treaty of Waitangi as an important feature of New Zealand culture that parents may want to pass on to children, compared to 33% of NEMP students. In task four only 50% of our Y8 students described what Queen Elizabeth II is famous for, compared to 76% of NEMP students.

## **6.4 Professional Discussion and Development**

The results of our NEMP testing in social studies generated intense and far-reaching discussion among our staff. Our results, backed up by NEMP comment and analysis about gaps in children's knowledge and understandings of history, geography and culture, seemed to confirm some of the concerns we felt about our social studies programme.

### **Important Questions Raised**

Several important questions were raised.

- To what extent is children's knowledge and understanding of culture, especially cultural difference, determined outside the school setting?

- What is an appropriate balance in our social studies programmes between teaching processes (such as enquiry, thinking skills, social decision-making) and content (such as historical and geographical facts and figures)?
- What should children be expected to know about history, geography and current events at Y4 and Y8? How important is it that they know, for example, the date of Captain Cook’s visit, or the importance of the queen, or how to draw an accurate sketch map of New Zealand?
- How closely are we obliged to follow the social studies curriculum document in our school social studies programme? Do we have to do everything?
- If we don’t follow the document, how else do we determine what we will teach our students and, importantly, what we leave out?
- Should we invest more heavily in atlases, wall maps and timelines?

## **Our Concerns Echo Wider Debates**

Our questions echoed, somewhat unwittingly, the debates that have swirled around the teaching of social studies in New Zealand for many years (Harris, 2003. Keown, 1998). Analysis of NEMP data by Browne & Hawe (2004) suggests that the weaknesses we perceived in our teaching of essential learning areas about New Zealand society are widely shared. They note recent reports by the Australian Council for Educational Research (2002) and the Education Review Office (2001) in which both organisations expressed concern about the lack of guidance for teachers in the appropriate topic areas or foci for the social studies curriculum. Browne & Hawe go so far as to claim “the continued lack of national guidance for schools and teachers in this area may well result in NEMP functioning as a de facto means of identifying what constitutes appropriate social studies topics and content” (2004, p.47).

## **Changes Resulting from the Review**

At Ashburton Borough School we haven’t gone as far as making NEMP the source for our social studies programme but the information from our review has led to some significant changes.

First, we decided that, as a staff, we needed to focus on our own knowledge of New Zealand history and geography, that many of us lacked confidence in teaching material with which we were ourselves unfamiliar. This became a focus for our staff development, under the leadership of our principal, who has a degree in New Zealand history.

Second, we allowed ourselves greater flexibility in our use of the social studies document. In rewriting our school social studies programme as a result of the review we reduced the number of topics and achievement objectives, and provided more direction to teachers about the topics to be taught and the achievement objectives to be covered in each. We included the teaching of New Zealand history, geography and current events as specific goals of our social studies programmes from Y3 to Y8.

## **6.5 Taking Control**

### **Reclaiming a Degree of Professional Autonomy**

The changes we made to our social studies programmes as a result of the review were small in terms of programming and organisation, but significant in terms of our professional autonomy. There was a sense among staff that they were reclaiming a degree of independence after years of sometimes slavish acquiescence to policymakers and curriculum writers at ‘head office’. For some of our teachers, the classroom was the only place where they felt they exercised a degree of professional independence or where their voice as an educator could be heard. The social studies review enabled a greater number of staff to influence change at a school-wide level – an example of lifting our heads above the trenches and discovering that the enemy fire is not as lethal as we imagined.

The nature of our review process encouraged us to assume control. We felt we had a solid platform upon which to engage in robust discussion and confront the shortcomings of our programmes. The data was authoritative but sufficiently neutral to allay feelings of anxiety among teachers about their professional competence.

From experience we know teacher anxiety can sometimes block professional development.

To this extent our process embraces many of the values and structures of effective school development (Joyce & Showers, 1995; Macbeath & Mortimore, 2001; Leithwood & Louis, 1998). The change process initiated by our review model is dynamic, enquiry-based and can lead to 'double loop learning' as defined by Argyris, where we begin to change not only practice, but also values (Piggot-Irvine, 2005, p.6).

### **The Importance of Data-Based Decision-Making**

Our successful management of change in social studies owes much to NEMP. Our confidence was boosted enormously through having accurate and verifiable data about the achievement of our students (Timperley, 2003, 2004). The message of the data was strengthened because it measured specific learning outcomes for students and it gained credibility among staff because it could be referred back to NEMP. It was useful – and it was used. Furthermore, it was data that the school owned: it sprang not from a MOE directive but from a holistic process of school development in which change is a cumulative process fostered by reflective practice. Within this process data is not only the justification for change, it becomes the standard against which we measure progress.

# Chapter Seven: Curriculum Review Within an Integrated Management Structure

## Key Points

- Research shows that student achievement is improved when a school becomes an organisation where all members are actively engaged in learning.
- School improvement is fostered by taking a holistic approach that integrates management systems
- Curriculum review, appraisal and staff professional development are integrated at Ashburton Borough School through techniques of reflective practice.
- The main purpose of NEMP-based curriculum review is to help identify highly-targeted goals for staff professional development.
- Links between curriculum review and appraisal have been strengthened through the development of a Quality Learning Circle appraisal model.

The focus for this section is how the NEMP-based model of curriculum review informs, and transforms, management systems at Ashburton Borough School.

## 7.1 Schools as Learning Organisations

### A Learning Organisation Enhances Student Achievement

Over the past two decades a growing body of research literature supports the view that student learning in schools is strongly improved when the school itself becomes a learning organisation in which all participants - management, teachers and students – are engaged in learning. Michael Fullan reminds us, however, that “schools are poorly designed for integrating learning and teaching on the job” (2001, p.266).

Many factors contribute to this, including: stress, workload, poor management, classroom isolation and inadequate pre-service and in-service training (Joyce & Showers, 1995, p.6). Transforming schools into learning organisations may also be hindered by a lack of self-belief among teachers and managers in their capacity to initiate and manage change.

Our efforts to develop an effective model of curriculum review at Ashburton Borough School have been part of a wider process of transforming ourselves into a learning organisation. Our aim has been to take control of the change process by making decisions about what student data to collect and using the data to challenge our professional practice.

### **Key Management Systems are Integrated**

Linking curriculum review with other management systems in the school is essential in developing a learning culture. We share the view of Macbeath and Mortimore (2001, p.205) that “add-on improvement programmes will not work”. What is needed to effect real change is a holistic approach that aligns the many systems within a school. Kemmis and McTaggart (1988, p.30) remind us also that efforts to make improvements are parts of a bigger picture: “a broad, deep, critical and self-critical perspective on the relationship between the *actual* and the *possible* in our work, between what we are doing and what might be done.”

To enhance the outcomes of our review process we have attempted to link it closely to school-wide professional development and appraisal (Fig. One).

### **Reflective Practice**

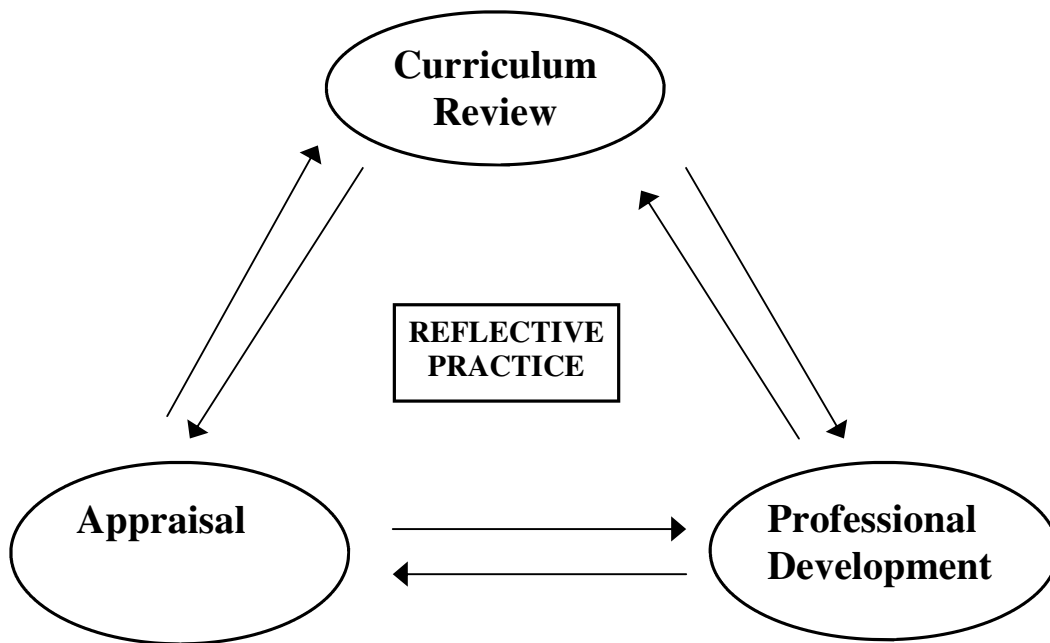
Crucial to bringing the management systems together is a process called reflective practice. Reflective practice is an essential feature of good quality management systems. It is a process of enquiry that seeks answers to some key questions in school development:

- Where are we now?

- Where do we want to be?
- What steps can we take towards improvement? (McMahon, 2002)

Reflective practice is a problem-posing and problem-solving technique, which can operate in a school through many channels: curriculum committees, professional development activities, staffroom conversations, appraisal dialogues, strategic planning, formal and informal reporting. Reflection is both a procedure and a goal, practise influencing practice.

**Fig. One Integrating Management Systems**



## **7.2 Curriculum Review and Professional Development**

### **Taking Ownership of Professional Development**

Linking curriculum review and staff professional development (PD) programmes is essential to developing a learning culture in a school. A strong review process

enables a school to organise PD activities that address specific gaps in teaching and learning programmes. With the confidence that arises from gathering robust data about student achievement staff can develop skills in selecting and conducting effective PD. Ownership of the process improves the chances of success, as Leithwood & Louis (1998) point out:

“Organisational learning seems to be fostered by a rich menu of opportunities of both a formal and informal nature. These conditions for teacher learning...are not well reflected in current practice. Professional development opportunities for teachers often focus on issues or problems identified by people other than teachers and frequently occur in ways that leave teachers isolated in their subsequent efforts to make sense of what they learn for the purposes of their own practice.” (p.87)

At Ashburton Borough School the main purpose of the NEMP-based curriculum review programme is to help us generate highly-targeted PD activities. It does this in two ways.

### **Data Highlights Areas for Professional Development**

First, the data generated in reviews is the stimulus and platform for debate about student achievement, which eventually defines areas for improvement through PD. In other words our review programme reduces our dependence upon others to identify our professional development opportunities, as highlighted by Leithwood & Louis above. Sometimes areas for improvement are obvious: for example, results from those NEMP tasks in which our students have performed significantly worse than their peers nationwide. Usually, however, there are no glaring gaps and the temptation is to conclude that there are no problems and, therefore, no need for discussion or PD. The challenge at these times is to look deeper into the picture of achievement drawn by the data.

### **Useful Questions to Prompt Reflection**

We can ask ourselves some useful questions to prompt this analysis.

- Are we satisfied that our students appear to be performing at about the same level as NEMP's aggregated results?
- Do our achievement levels adequately reflect the level of resourcing we invest in this curriculum area?
- Do our achievement levels reflect our decile ranking and other indicators?
- Are there some areas where our students are performing significantly better than NEMP results? Does this reflect pockets of excellent practice in our school and, if so, can this be translated into other areas?
- Are there some groups of students who seem to be performing significantly better than others? If so, why?

As our second four-year cycle of review proceeds we can add further questions:

- How does student achievement now compare to achievement four years ago?
- What factors may have contributed to an improvement/decrease in performance over four years?

To a large extent these questions could be stimulated by school-wide assessment data generated from almost any source: asTTle, PATs, Running Records, National Exemplars or others. However, what makes NEMP unique and, we believe, more useful is the ease with which comparisons can be made with nationwide achievement data and that this data is available across the entire curriculum.

A further benefit of using NEMP is the analysis that accompanies the data. Comments in NEMP reports about trends in student achievement or the achievement of particular groups of students are a valuable stimulus to school-wide discussions around our own data. At times the analysis in NEMP has been influential in directing our curriculum development programme; for example in our 2003 review of social studies.

## **The Importance of Choosing Well-Focused Goals**

The second way in which curriculum review influences PD is that the highly focused nature of the review programme enables us to be equally well focused when deciding

PD goals and activities. Organisational learning is fostered not just by conducting regular review, but by establishing a restricted, manageable number of priorities for action (Leithwood & Louis, 1998, p.75). Choosing a few well-focused goals for PD is a challenge amidst a ceaseless flurry of initiatives and imperatives from government and other agencies. Adopting a philosophy of doing “a few things well, rather than a lot poorly” is vital (Piggot-Irvine, 2005, p.3). The cyclical nature of the NEMP-based model gives us confidence that, over time, all curriculum areas will be thoroughly addressed. Consequently, we feel less pressure to embrace the latest ‘bright idea’.

### **Whole-Staff PD is Most Effective**

At Ashburton Borough School almost all PD activities are selected from the curriculum review programme and are conducted as a whole staff. We have been encouraged to take this approach by research which demonstrates that group approaches to staff development are much more powerful than individual ones. For example, Joyce & Showers (1995, pp13-14) identify whole-staff development as being ten times more effective in fostering meaningful change to teachers’ classroom practice than individual PD. Davison (1999) describes some specific advantages.

In group approaches teachers can share the load of investigating and trialling new ideas, discuss and reflect on outcomes, observe and coach one another. (p.1)

Furthermore, by enabling all staff, over time, to plan and lead PD programmes through their involvement in curriculum committees, we hope to achieve the high level of ownership that is a crucial factor in effective adult learning (Zachary, 2000).

Whole-staff development does not exclude individual PD programmes. Our approach reflects Davison’s view that PD is a ‘development partnership’ (p.1) between individual and organisation, with both needs considered simultaneously. Staff continue to attend one-day or extended courses to fulfil appraisal goals. In recent years several staff have completed tertiary study programmes, with costs subsidised by the school.

## **Challenges to Delivering Highly-Focused PD**

Generating highly specific PD goals through the curriculum review process offers challenges in conducting effective PD. Like most schools we tend to rely upon College of Education advisory services to provide PD support and facilitation. Since the inception of our current review model this has been problematic at times, because advisors tend to deliver a prescribed PD programme built upon their own expertise, the curriculum document and the latest initiatives from the Ministry of Education. While these are important and highly useful they do not usually match the specific PD goals we have generated through our review. The challenge for us is the extent to which we are prepared to compromise specific goals. On one hand, we want to learn about new ideas, techniques and programmes. On the other hand, we are committed to filling the gaps identified in our review.

Sometimes we have worked successfully with advisors to modify their programmes to suit our goals. Some are excited by the evidence of our review and work positively to give us what we want. At other times we fail to communicate our needs or the advisors are unwilling or unable to alter their programme. This remains a source of frustration.

In line with our growing confidence as a learning organisation we increasingly use our own expertise to deliver PD. Our experience matches a school identified by Darling-Hammond, Cobb & Bullmaster (in Leithwood & Louis, 1989, p.166) where, as a result of teacher-driven review, “the whole notion of staff development was turned on its head. The emphasis shifted from outside consultants to in-house experts. Collaborative learning groups replaced the traditional lecture/demonstration format.” Our delivery of social studies PD is an example of using ‘in-house’ expertise.

This approach has both weaknesses and strengths. A weakness is that the school may become too introverted in its PD programme. Opportunities to participate in Ministry of Education PD contracts may be passed over, with loss of funding and exposure to

new ideas and techniques. A strength of the approach is that by promoting internal expertise the school opens pathways of communication, builds confidence and begins to realise the potential of staff as professional leaders and learners. At Ashburton Borough School we have extended this initiative through our appraisal system.

### **7.3 Curriculum Review and Staff Appraisal**

In our model of reflective practice (Fig One) curriculum review influences staff appraisal by providing a powerful example of enquiry-based learning. Through their involvement in the review programme staff gain experience in gathering data, using data to make informed judgements about teaching and learning, confronting areas of weakness and developing strategies for improving these.

#### **Balancing Accountability with Professional Development**

Since 1999 our appraisal system at Ashburton Borough School has tried to balance accountability with professional development. These dimensions of appraisal are often contradictory (Stewart & Prebble, 1993; Cardno & Piggott-Irvine, 1997). A consequence of integrating review, development and appraisal systems has been to shift the focus of appraisal towards development, inspired partly by the promotion of reflective practice techniques.

Until recently our appraisal system centred on classroom observations and interviews by the appraisal manager (who, for most staff, is the DP), and on a professional journal in which staff recorded annual appraisal goals, completed written reflections on what they learned from teaching selected units of work and listed professional development activities undertaken to achieve appraisal goals. Appraisal generally comprised four meetings annually with the appraisal manager, two of these involving classroom observations, with the possibility of more contacts to support the staff member towards his or her appraisal goals for the year.

## Quality Learning Circles

Since 2003 the appraisal system used by most of our teaching staff has changed to a Quality Learning Circle (QLC) model, inspired by the work of Stewart & Prebble and informed by research around holistic models of staff development (for example Lovett, 2002; Hopkins, 1994).

QLCs are small groups of four to six members who conduct peer supervision through the active research of themes. Groups are free to select whatever themes or ideas are important to the group members. Most, but not all, themes relate directly to classroom practice, including teaching techniques, behaviour management, assessment and curriculum knowledge. A theme is usually explored over the course of one school term. Table Fifteen shows a generalised example of a QLC appraisal round.

**Table Fifteen: A QLC Appraisal Round**

<b>Time</b>	<b>Action</b>	<b>Participants</b>
Week 1	Selection of theme. Staff paired for observations and discussion.	Whole group
Week 2	Refine specific ideas around the theme and prepare to conduct observations.	Pairs
Week 3	Reflect on current practice around the theme.	Individuals
Weeks 4-7	Observations and discussions. Action points identified.	Pairs
Weeks 8-10	Action points followed up. Reflections on changes to practice.	Individuals
Week 9 or 10	Ideas and experiences shared, theme reviewed and possible future theme identified.	Whole group

QLC appraisal is not always conducted as paired observations. In recent rounds QLC groups have chosen to explore themes through:

- Half-day workshops involving all group members
- Visits by group members to other schools to observe good practice
- Invitations to experts (advisors or teachers with specialist skills) to teach model lessons observed by group members.

Participation in QLC groups is voluntary. Staff choosing not to join the QLC process continue to conduct appraisal with the appraisal manager. Accountability (for purposes of attesting to teacher competence and reporting to the BOT) is maintained in the QLC model through;

- the appraisal manager attending QLC meetings and reporting outcomes of themes to the principal
- the requirement that themes must be selected from the dimensions of the teacher professional standards, with a coverage of these during the course of a year
- the principal maintaining an overview of planning, assessment and teaching practice for all staff.

The introduction of QLC appraisal has strengthened reflective practice at Ashburton Borough School, and greatly assisted our progress towards becoming a learning organisation.

### **QLC Appraisal Supports Curriculum Review**

The work of QLC groups has strong links to our curriculum review process. Sometimes the discussions and challenges generated in curriculum review are selected by QLC groups as themes for study. Whole-staff PD activities undertaken as a result of review may be pursued in greater depth by QLC groups. In this way the goals of whole-staff PD are developed through peer coaching, classroom observation and extended reflection in a small group of colleagues with high levels of open communication and trust.

In turn, the QLC process informs curriculum review by providing alternative sources of data on student achievement and teacher effectiveness, by generating ideas and information for school-wide review and by celebrating successes.

# Chapter Eight: The Benefits and Challenges of NEMP-Based Curriculum Review

## Key Points

- Access to high quality data about student achievement is crucial to school development programmes.
- Using NEMP to conduct curriculum review allows a school to access high quality data about achievement nationwide and to generate data about its own students.
- While generating data is important, reflecting on that data and using it to answer the question ‘where to next?’ is more important.
- Using NEMP poses challenges of time and expertise in testing and data analysis.
- NEMP may enable schools to report annual achievement targets in curriculum areas that are more difficult to measure.

Any well-designed curriculum review programme will benefit students and teachers in a school. In recent years the efforts of New Zealand schools to set up effective review processes have been strengthened by the introduction of powerful and effective assessment tools, such as National Exemplars, asTTle and NUMPA. This section summarizes the benefits of using NEMP to gather and analyse data in school-wide curriculum review. Consideration is also given to some of the challenges of using a NEMP-based model.

## **8.1 The Benefits of NEMP-based Curriculum Review**

### **Access to High Quality Data**

School development can only operate “on the basis of ready access to high quality data” (Stewart & Prebble, 1993, p.106). NEMP provides high quality data on student achievement. NEMP data and comments made about the data in NEMP publications can, by themselves, stimulate productive discussion and review within a school, as we discovered in our 2003 review of social studies. An advantage of NEMP data over other assessment tools is that it is continuously being ‘refreshed’ through NEMP’s four year review cycle. Whereas the database for most other assessment tools eventually becomes an historical artefact, NEMP’s database always provides a picture of student achievement that is no more than four years old.

### **Gathering Data**

Using NEMP as an assessment tool enables a school to gather data about the achievement of its students. Unlike most other assessment tools NEMP tasks embrace all curriculum areas and the essential skills. They also provide assessment surveys to determine students’ attitudes to learning. The huge variety of tasks enables a school to select tasks for precise purposes. Schools may choose (as we do) to assess a range of knowledge and skills in a curriculum area through the selection of several NEMP tasks. Alternatively they may wish to apply a few tasks, or even a single task, to gain a picture of student achievement that relates to one or two achievement objectives. The fact that few NEMP tasks are simply pencil-and-paper activities means a much wider range of knowledge, skills and attitudes can be assessed and judged. Using NEMP teachers can make better judgements about the ability of those children who may be relatively weak in written tests.

### **Using Data to Stimulate Discussion**

Using NEMP to generate data on student achievement offers a school the opportunity to compare the achievement of its students with students nationwide, with groups

identified through race or gender, or with other schools identified through decile ranking and location (e.g. rural or urban).

While the usefulness of such comparisons is limited by the practicalities of replicating NEMP testing conditions and the limited size of a sample of students from a single school compared to the relatively large numbers of students tested by NEMP, such comparisons may nevertheless be useful for stimulating discussion about student achievement in a school. Comparing school-wide data with NEMP data can suggest areas of weakness or strength that might otherwise remain unnoticed. Using the rich resources of NEMP, schools can generate assessment data and are also encouraged to take the crucial next step of using the data to improve student learning. All too frequently schools fail to take that step, perhaps because most assessment tools do not offer guidance to answer the question ‘where to next?’ (Joyce, Calhoun & Hopkins, 1999). Terry Crooks, one of the directors of NEMP, made the point in a recent conversation with the author that reflecting on data is much more important than gathering it. He offered the view that it doesn’t really matter what data is gathered as long as you use it to inspire discussion and ideas. Of course, high quality data is more likely to inspire high quality reflection.

### **Developing a Cyclical Approach to Curriculum Review**

NEMP provides an excellent model of cyclical review. At Ashburton Borough School we have found that by copying NEMP’s example we have built a solid platform upon which to base school improvement. The four year review cycle gives us the assurance that we are meeting our obligation to review all areas of the curriculum and it becomes a benchmark for evaluating new programmes and initiatives that are offered to schools from time to time. We find we are less susceptible to being swept up in the latest educational bandwagon.

### **Focusing on Proximal Change**

Using NEMP as the basis of school-wide curriculum review enables us to remain focused on proximal change. Joyce & Showers (1995) define proximal change as

change that directly affects teaching and learning. They claim many schools undergoing change will start by focusing on distal change – discipline, reporting, assessment etc. – which has little or no effect on student achievement. NEMP’s constant focus on the achievement of New Zealand students helps us remain focused on the same goal. Aligning staff appraisal and PD programmes closely with curriculum review further reinforces the focus on improving teaching and learning.

## **8.2 The Challenges of NEMP-Based Curriculum Review**

As with the benefits, many of the challenges of a NEMP-based curriculum review programme are common to all such programmes. Probably the biggest challenges are sustaining the programme in the face of competing demands for limited resources, maintaining enthusiasm and energy for a programme that has become very familiar and resisting the attraction of new ‘quick-fix’ strategies.

Perhaps the best way to meet these challenges is to regularly ‘review the review’. Does our model continue to be useful? Is it still serving its purpose of inspiring discussion and focusing PD activities which lead to improved student learning? There is always a risk that we continue to do things simply because that’s what we do, rather than because they continue to be useful.

Among the challenges common to all curriculum review programmes we can identify some that are particularly relevant to a NEMP-based model.

### **Small Sample Size Limits Comparisons**

When we developed our NEMP-based model we thought we could use it to make direct comparisons between the achievement of our students and students nationwide. We soon discovered the limitations of this, caused by our small sample size. Limited resources generally allow us to test about 30% of our Year 4 and Year 8 students, usually 10-15 students at each level. These small numbers, combined with the

challenge of duplicating NEMP test procedures, mean that variations in the performance of one or two students can significantly affect our results.

Our response has been to reduce the number of tasks we administer, in order to focus on assessing a few areas well, and to take great care in selecting a cross-section of abilities when choosing students for testing. Most importantly, we use the data generated by NEMP testing mainly to identify broad trends in achievement for the purpose of stimulating debate about teaching and learning, and for planning staff PD programmes.

### **Testing Requires Time and Expertise**

NEMP provides rich data but it does so with less alacrity than some other assessment procedures. The fact that few NEMP tasks are simple pencil-and-paper tests requires a strong commitment of time to administer tasks accurately and carefully. It also requires greater skills in techniques of questioning, listening, prompting and recording than are usual in test administration. Most teachers possess these skills and the opportunity to refine them through NEMP testing is one that many teachers take up annually by working as administrators for NEMP. However, in the busy-ness of school life it is not always easy to release a teacher to test children one-to-one or in small groups.

At Ashburton Borough School we have to some extent overcome this problem by:

- using trained parent helpers whenever possible
- using trained Y8 students to administer some tasks to Y4 students
- carefully selecting tasks that meet our goals but which are relatively simple to administer. This usually means focusing on one-to-one and independent tasks, rather than group or station tasks
- having a single curriculum review manager for most of the past six years, which helps maintain consistency of practice.

Despite our efforts there have been occasions when the quality of our testing is not sustained. The lesson we have learned is to reduce the number of tasks we attempt to

administer in order to do the best with what resources we have available. This means for some reviews the strands or achievement objectives we review are more limited than for others. We justify this with the view that it is better to do a little well than to do a lot poorly.

### **Task Materials Are Not Always Accessible**

As discussed earlier in this report we have sometimes been limited by the availability of resources to administer tasks. At times we have improvised quite satisfactorily. Fortunately there is always a sufficiently wide range of tasks to enable us to select ones that are easily resourced without compromising the quality of our review. The availability of kits of NEMP Access Tasks through NZCER, and the publication by USEE of the Teachers' Choice of NEMP Tasks have overcome this problem.

### **Analysis and Reporting of Data Requires Expertise**

Some skill is required to analyse and report the results of NEMP testing. Collating and graphing test results is greatly aided by using a computer spreadsheet programme such as Microsoft Excel. Judgement needs to be made about which data are most significant and what aspects of the 'story' told by the data should be reported. In this the curriculum review manager and curriculum committee must be guided by the purpose of the review, which at our school is always to identify trends and gaps in student achievement for the purpose of planning staff PD.

### **The Four-Year Cycle May Become Too Rigid**

There is a risk that modelling our review programme on NEMP's four year cycle makes us too rigid to respond to unforeseen problems or opportunities. At times we feel we devote energy conducting PD in curriculum areas where the review has revealed no significant gaps in our student achievement while, at the same time, other curriculum areas may be obviously in need of some input. We feel an obligation to cover all curriculum areas because each gets only one chance every four years.

Remaining true to the four year cycle is a trade-off between the flexibility of opportunism and the relative rigidity of a planned, sequential programme of review. We have to trust that programmes with gaps and problems will be fixed, but perhaps not this year, or even next. The alternative too often is that some areas are neglected long term while others are repeatedly mended, or that initiatives are ill-considered, opportunistic and result in 'single-loop' learning.

Compromise is important. For example, in 2002, the English curriculum committee decided to curtail PD in written language because the school was involved in the Numeracy Development programme.

A further challenge of our cyclical programme is that it excludes the review and development of non-curriculum areas such as assessment, reporting to parents and behaviour management. These areas are scrutinised as part of the school's overall review programme, but they tend to receive fewer resources for professional development.

### **8.3 Using NEMP to Report School-Wide Achievement Goals**

The Education Standards Act (2001) introduced the requirement that schools identify annual learning targets and report progress on these to the Ministry of Education. Spelling, number skills and reading ages tend to be the most common learning targets, not simply because they are the 'core business' of primary schools but also because they are the most easily measured, through familiar assessment techniques such as running records, PATs, asTTle and NUMPA. Schools may be less likely to select learning targets from curriculum areas such as science, social studies and the arts where there are fewer techniques for gathering assessment data that demonstrates trends across the whole school or among specific groups of students.

NEMP may enable schools to report annual achievement targets in curriculum areas that are more difficult to measure, because NEMP tasks cover all curriculum areas. They are comprehensive and also very specific about student achievement. Using NEMP a school could measure very specific achievement targets with a considerable

degree of accuracy. They could do this by identifying a NEMP task that measures their achievement target and testing all students in selected year levels or all students in groups for whom the achievement target is relevant.

Another advantage is that NEMP tasks examine a wider range of skills and knowledge than assessment methods that rely mainly on pencil-and-paper tests. Such tests have limited value in assessing student achievement in music, dance, social values or scientific method. NEMP's data on nationwide achievement in these areas may also be useful for schools when reporting annual goals, enabling comparisons of performance against clear benchmarks.

A drawback is that NEMP tasks are designed for Year 4 and Year 8 students. Their use with other levels may be limited.

# Conclusion

The development of a NEMP-based curriculum review programme at Ashburton Borough School arose for a number of reasons. These included expectations from government that schools conduct self-review and our own desire to take greater control of both the pace and nature of change in our school.

Principally, however, our model sprang from the common desire of all teachers in all schools to improve student learning.

Does our curriculum review programme improve student learning? No, not directly. The main purpose of the model described in this report is to provide accurate information about student achievement from which decisions can be made about professional development activities.

Indirectly the model does contribute to student learning. As we proceed through our second four-year review cycle we are beginning to identify areas of student performance where gaps seem to have been closed (as, for example, in our 2003 maths review). It is reasonable to assume that the highly focused staff PD we conducted in those areas has contributed to the improved performance of our students.

This report describes a model of curriculum review and a journey we have taken towards transforming our school into a learning organisation. We are attempting to move away from “relatively isolated, highly targeted innovations intended to solve specific educational problems, and toward a fluid, continuous enquiry to make education better on a day to day basis” (Joyce, Calhoun & Hopkins, 1999, p.9).

Essential to this process has been the integration of key management systems through techniques of reflective practice. By redefining our school as a community of learners we connect the achievement of students to our own achievements as teachers and managers. By regarding school improvement as a process of continuous enquiry we are challenged to confront our weaknesses and overcome them. Our ability to do this

is greatly enhanced by a NEMP-based review programme that identifies where we are now, where we need to go and how we may get there.

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