Improving Educational Outcomes in the Northern Territory

preliminary advice to the Northern Territory Department of Education and Training, with a particular focus on the ongoing improvement of students' literacy and numeracy achievements

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Dear Minister Burns

I have pleasure in presenting the first report of my review and evaluation of current school education initiatives in the Northern Territory.

This first report is based primarily on my examination of a number of documents provided by the Department. These documents describe a range of initiatives currently underway, including the implementation of a literacy and numeracy strategic plan, the introduction of a T-9 Diagnostic Net, planning for regular school reviews and principal performance appraisals, the introduction or a regional structure with new positions and responsibilities, and various activities under the National Partnership Agreements. I have also undertaken some analyses of recent Northern Territory NAPLAN data.

The result of my examination of these documents is a set of recommendations to the Department. Most of these recommendations relate to the specifics of current initiatives. For example, I caution against the use of the T-9 Diagnostic Net to collect aggregated system-wide data because of the likelihood that teachers' judgements against the expectations in the Net will be insufficiently comparable across schools. I recommend a clearer separation of regular school reviews from principal performance appraisals, noting that these are inevitably related. And I argue that, under the regionalisation agenda, a high priority should be given to the central (system-wide) specification of expectations of students, teachers and school leaders, and that activities such as the design and delivery of resources and professional development programs be treated as a central priority, with minimal duplication of effort at the regional level.

In addition to these desk analyses, I have visited nine schools – three in Central Australia, three in Darwin and three in Katherine. Further school visits (including in Arnhem) are planned. I have also had a number of conversations with most of the senior staff of the Department, including a full day with the three Executive Directors schools and the six Directors School Performance. I have spoken at principals' conferences in Darwin and Alice Springs and met with the NT Board of Studies and staff of the Menzies School of Health Research. I shared some of my reflections on the educational challenges faced in the Northern Territory with you when we met on 24 March. In the next phase of my work I will be giving further consideration to these challenges.

One general observation I have made in my visits to schools is that there are many different educational programs and initiatives being implemented across the government system. The variability in programs is greater than I have seen in other government systems. With a large proportion or teachers and leaders being recruited from outside the Territory, many appear to bring curricula and

programs with them from other states and territories or from overseas. While some degree of autonomy and responsiveness to local needs is desirable, it is not obvious to me that all of the school-level practices and initiatives I have observed are in the best interests of all students. And because such a large proportion of students move between schools in the Territory, the wide variety of curricula, programs and practices may be compounding the problems faced by children who move between schools.

This first general observation has led me to recommend that the system take a stronger position on what it wishes to see happening in all government schools by developing explicit statements of:

- what all students should be learning
- what effective teaching looks like in the NT
- what effective school leadership looks like in the NT

Recent progress has been made on the first of these through the development of the T-9 Diagnostic Net which spells out the literacy and numeracy skills expected of all students by the end of each year of school from Transition to Year 6. From my conversations with the Executive Directors, the Directors School Performance and some school principals, I believe it would be possible to develop clear descriptions of the kinds of teaching and the kinds of leadership that the system wishes to see occurring in all classrooms and all schools. The purpose would not be to constrain practice, but to ensure that best practice is understood, shared and promoted throughout the Territory. The aim should be to have all teachers doing what the best teachers already do, and all leaders doing what the best leaders already do. Ultimately, improvements in student learning and outcomes will depend on improving the quality of teaching throughout the system, and highly effective school leadership has been shown to be a powerful factor in promoting high quality teaching.

Once developed, explicit descriptions of effective teaching and effective leadership would provide frames of reference for designing coaching, mentoring and professional development programs, evaluating the quality of teaching and leadership, and recognising and rewarding outstanding practice. Explicit expectations of practice also would provide a basis for conversations between teachers and school leaders, and between school leaders and Directors School Performance.

A second general observation is that low average student performance levels in the Territory, particularly among Indigenous students, have their origins in the years before school. While conclusions about average student progress across the school years are complicated by declining enrolment rates, the available evidence suggests that, once in school, students in the NT make good average progress. The problem is that a large percentage of children begin school significantly behind the rest of Australia and never catch up. The reasons for this are well known and include many students having limited proficiency in English prior to school, health problems and the impact of remoteness and poverty.

Most of these challenges require a whole-of-government response. The Northern Territory's *Early Childhood Plan*, the *National Early Childhood Development Strategy* and the *Families as First Teachers* program are important current initiatives to improve health and development outcomes for young children, including by building parents' and families' understandings of the factors underpinning healthy development in early childhood.

The implication for schools, I believe, is that they must become increasingly involved in the learning and development of children in the years prior to school (that is, from birth). Given the high proportion of NT children who are judged to be developmentally vulnerable by five years of age, the earlier that developmental delays and needs are identified and addressed, the better. One general strategy would be to develop greater explicitness about what development is expected of all children by particular ages and to conduct assessments to identify children who are at risk and require special support.

For example, there may be value in developing clearer expectations of all children upon entry to Transition. Clarity about what every child should know and be able to do by the end of the preschool years could provide valuable guidance to parents and families, carers and preschool teachers. Such a specification might include basic personal skills and behaviours, oral language development, and a basic knowledge of letters, numbers, shapes, etc. A standardised assessment and record of every child's development at this point – undertaken by teachers – not only would inform the kinds of learning expected during the preschool years, but also would provide starting points for teaching and learning in Transition.

Ongoing efforts also will be required to maximise the number of children who benefit from preschool learning programs. It is clear that some children currently commence Transition with no preschool experience and are significantly under-prepared. Other children have only occasional access through mobile preschool arrangements in remote communities. The general challenge will be to continue to increase the number of children who have access to quality preschool learning programs and meet minimum expectations on entry to Transition.

Similar clarity could be developed for the outcomes expected for all children by the end of Transition. A start on this has been made through the development of the T-9 Literacy and Numeracy Net. The difficulty at present is that many children enter Transition with such limited skills in literacy and numeracy that the achievement of T-9 Net expectations by the end of Transition is unlikely.

As part of the effort to address learning needs as early as possible and to set clearer expectations for the learning and development of all children, consideration could now be given to making Transition a compulsory year of school and possibly renaming it (eg, Kindergarten). As the first compulsory year of school, this year would have an associated curriculum with clear learning expectations of all children. Under such an arrangement, the non-

compulsory preschool year could be conceptualised as the 'transition' to school.

A third general observation is that, given the high rates of student (and teacher) mobility in the NT, significant disruptions to some children's learning are occurring as they move between teachers with limited or no histories of their past learning. A central database containing agreed assessments of all children at key points in their learning and development presumably would assist teachers in tracking and understanding individual progress and better identifying and addressing individual needs. Such a database might be developed in collaboration with other government agencies and include key health and other measures as well as measures of children's development and learning. For example, under the *Healthy Under 5 Kids* program, measurements of height, weight and haemoglobin levels are now made routinely, and the NT Government's *Growth Assessment and Action* program has collected data on the growth and nutritional status of children aged 0 to 5 in remote and very remote communities. However, health databases appear not to include more general measures of educational development and achievement and there is no consistency of assessment records in existing educational databases.

I look forward to further discussion of these preliminary reflections, the content of my initial report and the challenges facing school education in the NT.

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6 April 2011

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Introduction

In late 2010, the Northern Territory Minister for Education and Training, Dr Christopher Burns, and Mr Gary Barnes, Chief Executive of the Department of Education and Training, requested a review and evaluation of a number of initiatives being undertaken by the Department to improve educational outcomes in the Territory – particularly in the areas of literacy and numeracy. The expectations of the review included strategic advice and recommendations capable of being implemented over the ensuing twelve to eighteen months.

Although each of the Departmental initiatives identified for review could be considered in isolation, it is clear that these initiatives were not developed separately and are in fact elements of a larger, integrated improvement strategy being pursued by the Department. For this reason, the current review begins with a broad perspective on the improvement of educational outcomes (Section 1) and then considers the identified initiatives in the context of this broader perspective.

The primary focus of this review is on strategies for improving literacy and numeracy outcomes. Clearly, the role of school education is much broader than the development of students' literacy and numeracy skills, but these are foundational skills on which almost all other school learning is based. It is also clear from research that low levels of literacy and numeracy by the middle years of school are associated with lower school completion rates and a range of post-school outcomes, including higher levels of unemployment, lower lifetime earnings, and poorer health outcomes. Although the primary focus of the review is on literacy and numeracy, many of the underlying strategies and principles discussed in this report apply equally to other areas of school learning.

1 Improving Literacy and Numeracy Performances

The key strategy available to school systems for raising literacy and numeracy levels among school-aged children is to increase the effectiveness of classroom teaching. Almost all school systems understand this, but not all systems take the logical next step of making the improvement of day-to-day teaching practice the central focus of their literacy and numeracy reform efforts.

Improving teaching practice means *changing what teachers do*: getting all teachers doing what the best already do and assisting the best teachers to adopt still more effective practices. More specifically, improvements in students' literacy and numeracy levels depend on teachers becoming better at two things:

1. establishing where students are up to in their learning – including individuals' current levels of literacy and numeracy development, potential learning difficulties, misunderstandings, etc – as a guide to starting points for interventions and teaching; and

2. implementing effective, evidence-based interventions and teaching strategies tailored to students' current levels of progress and learning needs.

A school system seeking improvements in students' literacy and numeracy performances would be well advised to concentrate its energies and resources in *developing teachers' abilities to do these two things*. This objective needs to become a priority and focus for pre-service teacher education programs, continuing professional development, the work of school leaders, district/regional support and the work of central office. Highly effective school systems align efforts across the system in pursuit of improved teacher practice.

The above observation should not be interpreted as a criticism of teachers or a comment on current teacher practices. It simply recognises that, in any school system, continuous improvements in student performance can be achieved through continuous improvements in teaching practices. It also recognises that the professional work of teachers, like professional work of any kind, involves spending time understanding the specifics of each presenting case, problem or situation and then implementing evidence-based solutions appropriate to that context.

establishing where students are up to in their learning
Underlying this first aspect of effective teaching is a deep belief on the part of teachers that, at any given time, each student is at some point in their learning and is capable of further literacy and numeracy development. For a range of reasons, including language backgrounds other than English, individuals usually are at different stages in their learning and are progressing at different rates. Some students take longer than others to achieve expected standards of literacy and numeracy. But the fundamental assumption is that *every* student is capable of making good progress in their learning and achieving high standards if motivated and if exposed to appropriate learning opportunities.

With this underlying belief, the important questions are: Where is each student up to in his or her learning? and What can be done to facilitate that student's further progress? For schools and teachers, these should be more important questions than whether a student comes from a low socioeconomic background, is Indigenous or lives in a remote location. More important than explaining (or worse, excusing) current achievement levels in terms of student backgrounds is a commitment to understanding and then supporting every individual's further progress.

The process of establishing where students are up to in their learning first requires an understanding of the *nature of progress* in each aspect of literacy and numeracy. Highly effective teachers have a clear understanding of the nature of progress and are able to recognise indicators of individuals' current levels of development. School systems can assist in developing teachers' understandings of progress, for example by providing 'maps' of typical and intended paths of literacy and numeracy learning. These maps sometimes are referred to as developmental continua.

Teachers can be further assisted in establishing where students are up to in their literacy and numeracy learning through access to tools for this purpose. For example, standardised literacy and numeracy tests (both national and commercially available) are capable of providing information about students' achievement levels in comparison with achievement levels in other schools and school systems and in comparison with Year-level expectations. These tests also can identify aspects of literacy and numeracy in which a school or class is performing particularly poorly or well.

Classroom tools also include more fine-grained diagnostic instruments to better understand the reasons for a student's current performance. These 'drill-down' assessments usually are designed to identify specific skill deficits or misunderstandings that can then be addressed through targeted interventions.

The ability of teachers to establish where individuals are up to in their learning – including teachers' abilities to identify the need for specialist intervention and to diagnose gaps, misunderstandings and obstacles to further learning – requires a sound understanding of how skills in literacy and numeracy develop and a degree of sophistication in using assessment instruments and interpreting data. The development of these teacher skills and understandings should be a priority for system and school leaders.

Research also points to the importance of sharing information about learning progress with students and their parents. When students have an understanding of the standards and progress being sought and are able to see where they are up to in their learning they not only are better able to appreciate the progress they make over time, but also can be encouraged to accept a level of responsibility for their own learning and progress. When parents are able to see where children are up to in their learning, and what comes next, they are better able to identify ways in which they might assist.

implementing effective, evidence-based teaching strategies tailored to students' current levels of progress and learning needs

The second aspect of effective teaching practice has two elements: (i) the use of teaching strategies that are grounded in research and that have been demonstrated to be effective in practice; and (ii) the use of differentiated teaching to maximise learning by targeting students' readiness and learning needs.

The first of these elements recognises that teachers currently use a wide variety of teaching methods and that some of these methods are significantly more effective than others. There is now a substantial body of research into teaching approaches and a growing corpus of knowledge about effective strategies and the conditions under which particular teaching approaches are most effective. For example, there is now a significant research base relating to methods of teaching reading. Research has shown that highly effective teachers not only have deep personal knowledge of the subjects they teach, but also have highly developed 'pedagogical content' knowledge – that is, deep understandings of how students learn a subject, a repertoire of effective teaching strategies, and a knowledge of when and how to use those strategies.

Improvements in day-to-day classroom teaching can be made by ensuring that all teachers have a sound understanding of the subjects they teach; are familiar with research evidence concerning more and less effective teaching strategies; and have experience in using effective teaching methods.

The second element recognises that learning opportunities are most likely to result in successful learning when pitched at a level appropriate to individuals' learning needs and readiness. Students of the same age can have widely different levels of literacy and numeracy, with differences representing up to five or six years of school. Teaching targeted at the middle of a class can fail to challenge and extend higher achieving students and fail to engage, and thus de-motivate, lower achieving students. There is some evidence that learning opportunities are most effective when they are pitched just beyond a learner's current level of achievement: in the 'zone of proximal development' where students can succeed, but often only with scaffolding and support.

Beyond being able to establish where students are up to in their learning and being familiar with, and able to use, a repertoire of evidence-base teaching methods, highly effective teachers are able to differentiate and tailor learning opportunities to the readiness and needs of individual learners.

In summary, a key strategy for improving students' literacy and numeracy performances in a school system is to develop teachers' abilities to: (i) establish where students are up to in their learning and (ii) implement effective, evidence-based teaching strategies tailored to current levels of progress and learning needs. These abilities in turn depend on a clear understanding of the nature of progress (a framework or 'roadmap' that describes typical and intended paths of literacy and numeracy learning) and an underlying belief in, and commitment to, every student's ongoing learning. Improvement also is more likely when students, parents and families are given feedback on

individuals' current levels of achievement and are able to monitor progress over time. Table 1 summarises these five pre-requisites.

Table 1   Some pre-requisites for the continuous improvement of students' literacy and numeracy performances

Commitment to Improvement	a commitment to the continuous development of *every* student's literacy and numeracy skills
Improvement Framework	a framework that describes typical and intended paths of literacy and numeracy learning
Assessment Processes	processes for establishing where students are up to in their literacy and numeracy learning
Improvement Strategies	evidence-based teaching strategies tailored to students' current levels of progress and learning needs
Feedback and Monitoring	a process for monitoring and reporting ongoing improvements to students, parents and families

1.1   Teacher Effectiveness

Across a school system, teachers inevitably have different levels of knowledge, expertise and effectiveness in supporting students' literacy and numeracy learning. System-wide improvements in student learning depend on increased teacher effectiveness throughout the system. Although not all teachers are directly involved in literacy and numeracy teaching, there are likely to be benefits in developing all teachers' (and paraprofessionals') abilities to support literacy and numeracy learning – even among secondary teachers who may not currently see this as part of their professional responsibilities.

Attempts to clarify what teachers need to know and be able to do often adopt a broad view of teachers' work and result in general statements of teaching 'standards'. The question of interest in the present context is much narrower: What do teachers need to know and be able to do to *promote improved literacy and numeracy outcomes*?

The two aspects of teaching practice outlined above provide a starting point. However, each of these aspects requires detailed elaboration. For example, to 'identify where students are up to in their learning' teachers require a range of specific knowledge and skills, including knowledge of:
- how literacy and numeracy skills typically develop (eg, the nature and role of foundational skills);

- the levels of literacy and numeracy expected of students by particular ages/ year levels;
- the kinds of learning difficulties experienced by some students;
- methods for assessing literacy and numeracy achievement and progress;
- the interpretation of standardised literacy and numeracy test results;
- common student errors and misunderstandings; and
- available diagnostic processes and instruments.

The specific knowledge and skills required to 'implement effective, evidence-based teaching strategies tailored to students' current levels of progress and learning needs' include knowledge of:
- the content being taught (eg, a personal understanding of grammar, punctuation or mathematical processes);
- ways of sequencing content to build on and extend student learning;
- remedial strategies for addressing specific student errors and misunderstandings;
- particular teaching methods and their appropriate uses;
- the relative effectiveness of alternative pedagogical approaches;
- ways of engaging and motivating students (eg, providing real-life applications); and
- how and when to access specialist support.

The specific knowledge and skills that teachers require may be different at different levels of schooling (eg, early childhood, middle years) and for different teaching roles and responsibilities. For example, although a level of knowledge and skill might be expected of all teachers, a higher level might be expected of primary teachers, and a higher level still of specialist literacy/numeracy teachers and coaches. In all cases, the objective should be to specify what teachers are expected to know and be able to do, as a basis for identifying professional development needs and for monitoring teacher development over time.

Having clarified the knowledge and skills required for improved literacy and numeracy teaching and learning, the next question is how this knowledge and these skills are best developed. Coaching, mentoring, team-based learning within schools and/or regions, and structured professional learning programs and courses are all possibilities that teachers, schools and school systems might consider. Ideally, professional learning opportunities and activities will be informed by what is known about effective adult learning processes and will be tailored to individual teachers' learning needs.

There are clear parallels between the continuous improvement of student performance (Table 1) and conditions for the continuous improvement of teacher expertise and effectiveness. In both cases, ongoing development depends on:

1. a belief in, and commitment to, improved performance;

2. a clear understanding of what it means to 'improve' in identified areas of practice and performance;

3. a way of establishing current levels of performance as starting points for improvement;

4. a familiarity with effective improvement strategies appropriate to current performance levels; and

5. a system for monitoring improvements and evaluating the effectiveness of improvement strategies.

These parallels are summarised in the 'Students' and 'Teachers' columns of Table 2.

Table 2   Some pre-requisites for continuous improvement

	Students	**Teachers**	**Schools**	**System**
1 Commitment to Improvement	a commitment to the continuous development of every student's literacy and numeracy skills	a commitment to the continuous development of every teacher's effectiveness	a commitment to the continuous development of every school's practices and programs	a commitment to the continuous development of system initiatives and support
2 Improvement Framework	a framework that describes typical and intended paths of literacy and numeracy learning	a framework that describes increasing levels of teacher expertise and effectiveness	a framework that describes increasing levels of school practice and performance	a framework that describes increasing levels of system practice and performance
3 Assessment Processes	processes for establishing where students are up to in their literacy and numeracy learning	processes for establishing current teacher expertise and effectiveness	processes for evaluating current school practices and performance	processes for evaluating current system practices and performance
4 Improvement Strategies	evidence-based teaching strategies tailored to students' current levels of progress and learning needs	evidence-based, differentiated strategies for developing teacher expertise and effectiveness	evidence-based, differentiated strategies for improving school practices and programs	evidence-based, differentiated strategies for enhancing system effectiveness and support
5 Feedback and Monitoring	a process for monitoring and reporting ongoing improvements to students, parents and families	a process for monitoring and recognising increasing teacher expertise and effectiveness	a process for monitoring and reflecting on progress in improving school practices and programs	a process for monitoring and reflecting on progress in developing system initiatives and support

1.2   School Leadership

School leaders – both principals and others in senior leadership roles – are in powerful positions to drive improvements in the quality of classroom teaching and learning. In schools in which significant improvements have been made in student performance, the senior leadership team appears to have played a pivotal role.

Effective school leaders exert a direct influence on the quality of teaching and learning by establishing and driving a strong school improvement agenda; placing a high priority on the analysis and discussion of systematically collected student outcome data; creating a school culture of high expectations for every student's learning; applying school resources in a targeted manner to meet the learning needs of all students; building a professional team of highly able teachers who take shared responsibility for student learning and success; and ensuring that all teachers use effective, evidence-based methods to identify and address student learning needs (Figure 1).

School leaders across Australia vary in their current abilities to lead improvements in teaching and learning. Some are less effective in developing and communicating clear improvement agenda with accompanying targets and timelines. Some are less effective in bringing staff together into professional learning teams with a shared sense of responsibility for improving student learning. Others are reluctant to engage with the details of what teachers do in their classrooms. Still others are pessimistic about the possibility of improvement within their schools, explaining current achievement levels by reference to students' backgrounds.

A key strategy for school systems wishing to improve student performance is to build the capacity of all principals and others in school leadership roles to drive improved classroom teaching and learning. Once again, this requires clarity about the skills, knowledge and dispositions of highly effective school leaders. A starting point is to consider what the best school leaders already do – particularly in schools that have been turned around and that have experienced significant improvements in student achievement. Clarity about highly effective school and school leadership practices is a pre-requisite for evaluating individual school practices, identifying development needs and monitoring ongoing improvements in school performance.

The development of school leaders' abilities to drive improved teaching and learning requires a focus on the skills, knowledge and dispositions required to do this. Many leadership development programs begin with a broad set of capabilities required for school leadership (eg, the ability to manage people; manage resources; build external relationships). As important as these are, the focus of leadership development for improved student performance needs to be on the development of a narrower set of capabilities: those important for the instructional leadership of schools. Once again, a range of approaches to the development of leaders are likely to be useful, including mentoring, coaching, structured professional development and learning from highly effective peers.

An Explicit Improvement Agenda
The school leadership team has established and is driving a strong improvement agenda for the school, grounded in evidence from research and practice, and couched in terms of improvements in measurable student outcomes. Explicit and clear school-wide targets for improvement have been set and communicated, with accompanying timelines.

Analysis and Discussion of Data
A high priority is given to the school-wide analysis and discussion of systematically collected data on student outcomes, including academic, attendance and behavioural outcomes. Data analyses consider overall school performance as well as the performances of students from identified priority groups; evidence of improvement/regression over time; performances in comparison with similar schools; and, where possible, measures of growth across the years of school.

A Culture that Promotes Learning
The school is driven by a deep belief that every student is capable of successful learning. A high priority is given to building and maintaining positive and caring relationships between staff, students and parents. There is a strong collegial culture of mutual trust and support among teachers and school leaders. The school works to maintain a learning environment that is safe, respectful, tolerant, inclusive and that promotes intellectual rigour.

Targeted Use of School Resources
The school applies its resources (staff time, expertise, funds, facilities, materials) in a targeted manner to meet the learning needs of all students. It has school-wide policies, practices and programs in place to assist in identifying and addressing student needs. Flexible structures and processes enable the school to respond appropriately to the needs of individual learners.

An Expert Teaching Team
The school has found ways to build a professional team of highly able teachers including teachers who take an active leadership role beyond the classroom. Strong procedures are in place to encourage a school-wide, shared responsibility for student learning and success, and to encourage the development of a culture of continuous professional improvement that includes classroom-based learning, mentoring and coaching arrangements.

Systematic Curriculum Delivery
The school has a coherent, sequenced plan for curriculum delivery that ensures consistent teaching and learning expectations and a clear reference for monitoring learning across the year levels. The plan, within which evidence-based teaching practices are embedded, and to which assessment and reporting procedures are aligned, has been developed and refined collaboratively to provide a shared vision for curriculum practice. This plan is shared with parents and caregivers.

Differentiated Classroom Learning
In their day-to-day teaching, classroom teachers place a high priority on identifying and addressing the learning needs of individual students. Teachers closely monitor the progress of individuals, identify learning difficulties and tailor classroom activities to levels of readiness and need.

Effective Teaching Practices
The school principal and other school leaders recognise that highly effective teaching practices are the key to improving student learning throughout the school. They take a strong leadership role, encouraging the use of research-based teaching practices in all classrooms to ensure that every student is engaged, challenged and learning successfully. All teachers understand and use effective teaching methods – including explicit instruction – to maximise student learning.

Figure 1   Some effective school practices (Masters, 2010)

1.3 System Support

Finally, there is much that school systems can do to support improved student performances. Systems have some limited opportunities to influence student learning directly (eg, through curriculum and assessment materials and policies), but most of a system's influence is indirect, through initiatives to recruit, develop and deploy teachers, and to establish, develop and support schools and school leaders.

International studies of school systems show that high-performing and rapidly improving systems tend to have a number of features in common. These include:

- *a strong focus on student performance*
  In these school systems, the improvement of student performance is seen as the core business of teachers, schools and staff at all levels of the system. Resources are allocated and actions and initiatives are evaluated on the extent to which they result in improved student performance.

- *aligned effort*
  There is an alignment of effort across students, teachers, schools and the system around the core purpose of improving student performance. For example, system leaders, school leaders and teachers have a shared understanding of desired student outcomes and effective teaching strategies.

- *a commitment to improvement at all levels of a system*
  High-performing and rapidly improving school systems understand that continuous improvements in student performance depend on continuous improvements in teacher effectiveness, school practices and system support.

- *differentiated support*
  These systems also understand that the most effective forms of support may be different at different points in an improvement journey. This is true of students, teachers, schools and systems. Part of the key to improvement is to identify the forms of support likely to be most effective given current levels of development and performance.

The recent McKinsey review of the world's most improved school systems began by rating student performance in each system as Poor, Fair, Good, Great or Excellent (Mourshed *et al*, 2010). That review concluded that different forms of support for teachers and schools are most effective at different levels of student performance. For example, in school systems with very low levels of student performance, the most effective forms of support include addressing students' basic living needs, improving school attendance, providing scripted teaching materials and textbooks, and getting all schools to a minimum level in terms of infrastructure and student results. In school systems with very high levels of student performance, the most effective forms of support include decentralising decisions about teaching and assessment, encouraging collaborative practice among teachers, and promoting experimentation and innovation. In other words, the school systems experiencing the greatest

improvements in student performance appear to be effective in *differentiating* the forms of support they provide.

Sustainable improvements in student performance are most likely to result from a system's efforts to explain the case for improvement and to build the professional capabilities of teachers and school leaders to achieve improvements. Many school systems have adopted continuous improvement strategies from the world of management. These strategies include setting top-down targets for improved performance, holding employees accountable, implementing performance management reviews, and introducing systems of incentives and penalties. However, system strategies such as the setting of top-down targets and the provision of reward payments are unlikely to lead to sustainable improvements if they do not address the question of *how* improvements are to be made or build the required capabilities for improvement.

Many of the conditions for continuous improvement at the system level parallel the conditions at other levels (Table 2). Ongoing system improvement depends on a commitment to reform; clarity about the improvements being sought; a willingness and ability to reflect on current structures, programs and practices; a familiarity with effective system strategies for improving student outcomes; and the ability to monitor and evaluate the impact of system actions.

2 Literacy and Numeracy Strategy

Using the general observations in Section 1 as a point of reference, this section reviews the Northern Territory Department of Education and Training's (DET's) literacy and numeracy strategy, *Prioritising Literacy and Numeracy: A Strategy to Improve Literacy and Numeracy Outcomes 2010-2012*, and provides advice on the strategic directions identified in that document.

In early 2010 the Northern Territory Minister established a Literacy and Numeracy Taskforce to develop and oversee the implementation of a strategy for improving literacy and numeracy performances in the Northern Territory. The resulting strategy notes that the NT has unique demographics that need to be considered in developing strategies to improve literacy and numeracy levels. Approximately 40 per cent of school-age children in the NT are Indigenous (compared with approximately four per cent of children nationally), and 31 per cent of teachers work in remote and very remote locations. The strategy also notes that:

> despite substantial investment by the Northern Territory and Australian governments in supporting the improvement of literacy and numeracy skills for students, and the genuine effort of DET staff over many years to improve results, there has been no significant improvement in Northern Territory students' literacy and numeracy outcomes. Of particular concern are Indigenous students in remote and very remote locations across the Territory whose outcomes fall well below national averages.
> (Department of Education and Training, 2010, 5)

The strategy reports results from the National Assessment Program, Literacy and Numeracy (NAPLAN) for Indigenous and non-Indigenous students separately and notes that the performances of Indigenous students have a marked effect on overall Northern Territory results and represent a particular challenge for the system.

The *Prioritising Literacy and Numeracy* document makes many observations consistent with the observations made in Section 1 of this report. For example, it notes the importance of setting high expectations of what students can achieve and observes that schools that make significant improvements to student learning share a commitment to continuous improvement: a 'recognition that there is always room for improvement no matter how well students are doing'.

The document also acknowledges the central importance of effective classroom teaching in achieving continuous improvement:

> It is the teacher who makes the biggest single difference to student learning in schools… the *Prioritising Literacy and Numeracy* strategy focuses primarily on changing the ways many teachers work in classrooms.   (Department of Education and Training, 2010, 7-11)

The strategy recognises the importance of starting with 'clear and shared understandings' of students and their literacy and numeracy needs and of identifying and targeting students who are falling behind in their literacy and numeracy learning with 'tailored' learning opportunities and interventions.

It is argued in the strategy that teachers need:
- to deeply believe that all their students can learn what is expected;
- a strong sense of their own efficacy to enable that learning;
- more specific guidance regarding the expected literacy and numeracy attainment for children, particularly in the early years;
- more specific guidance in **'**cultural competence' in order to enter stronger partnerships with families, particularly Indigenous families;
- more specific guidance in teaching English language competence to learners of English as a second/additional/foreign language; and
- more specific guidance on how to use student demographic and achievement data (including NAPLAN) as assessment for learning and how to generate their own quality data about learning in order to inform planning, teaching and intervention.

The strategy also acknowledges the pivotal role of school principals in driving improved literacy and numeracy teaching and learning:

> The *Prioritising Literacy and Numeracy* strategy… is underpinned by the premise that improvement in literacy and numeracy is primarily dependent on the capacity of Northern Territory principals to influence the quality of teaching.
> (Department of Education and Training, 2010, 11-12)

> Increasing evidence over the last decade points to the role of the principal in creating the conditions of work that are conducive not only to teacher development but also to maximising teacher retention. Quality principals working as instructional leaders and leading Professional Learning Communities (PLCs) can create the conditions in schools that bring about improvements in student achievement.
> (Department of Education and Training, 2010, 8)

It is argued in the strategy that effective principals will:
- empower their teachers to improve teaching and learning;
- encourage the use of data to understand the learning (or lack of learning) of students;
- deploy resources (human and financial) targeted at improving the achievement of all students;
- build Professional Learning Communities (PLCs) with time for teachers to meet together in teams to focus on student learning;
- address the specific learning needs of school staff; and
- establish consistent, evidence-based, whole-of-school approaches to the teaching of literacy and numeracy.

In summary, the stances and values underpinning the *Prioritising Literacy and Numeracy* strategy are strongly in line with the observations made in Section 1 of this report and with existing research findings relating to effective teaching and effective

system and school leadership practices. The strategy is underpinned by an 'urgent commitment to change the status quo'; a belief that 'each student can achieve high standards given sufficient time, effort and support'; a recognition of the importance of 'valuing and building on different starting points of students, teachers, principals and regions'; a commitment to 'building enduring and sustainable capacity and capability in classrooms, schools and the system'; and to 'research-based, holistic, aligned and focused approaches'.

2.1 Comments

Having established a strong foundation for strategic action, the strategic plan does not then develop 'strategies' (by name), but instead proposes a set of 'elements' and 'key actions/deliverables'. These are reproduced in Appendix 1.

In my view, the document loses a little momentum at this point. The document would be better if it next identified a few big strategies that the system is going to pursue to improve literacy and numeracy performances across the Northern Territory. The seven identified 'elements' (Literacy; Numeracy; Literacy and Numeracy; ESL; Cultural Competence; Assessment Culture; Instructional Leadership) do not do this. And the key actions/deliverables are a mix of actions, some broad, some specific, some vague in their implications, some to be taken by schools, some by teachers, and some by the system itself. For example:

- Literacy and numeracy policy development commenced
- Schools maintain a sense of urgency around literacy and numeracy achievement for every student
- Teachers work collaboratively to develop common assessment tasks as the basis for discussion and learning

My first recommendation would be to focus strategic planning for improved literacy numeracy on what the *system* is going to do. This may include requiring every school to allocate a significant block of time each day to literacy and numeracy, or ensuring that every school principal receives professional development in leading a Professional Learning Community, but the focus is on what the *system* will do.

I would also begin by identifying a few major ways in which the system can make a difference (system 'strategies') and elaborating in more detail how the system will pursue these strategic priorities. Perhaps the easiest way to explain this is by way of an example. Table 3 identifies five possible high-priority actions on the part of the system for improving literacy and numeracy outcomes:

- clarifying student learning expectations
- clarifying what teachers need to know and be able to do
- enhancing teacher expertise and effectiveness
- clarifying effective school leadership practices
- enhancing school leadership practices

The italicised dot-points on the right of Table 3 provide suggestions for how the system might pursue each of these high-level priorities. These are at a broad level of generality and would require detailed implementation planning.

Table 3   A possible set of literacy and numeracy strategies

LITERACY AND NUMERACY STRATEGIES	
1. Clarify student learning expectations	• *Develop Literacy and Numeracy Expectations continua (T - 9 NET) detailing skills needed by all students, the order in which they need to learn them and what the system will expect them to have learned by the end of every school year; all teachers will use this as the basis for their planning across all subject areas.*
2. Clarify what teachers need to know and be able to do	• *Develop clear specifications of what teachers need to know and be able to do to support students' literacy and numeracy learning. These specifications may be different for different teacher roles and responsibilities. They should include:* - *personal literacy and numeracy knowledge and skills* - *knowledge and skills in identifying student learning needs* - *pedagogical content knowledge in literacy and numeracy* - *cultural knowledge and skills in embedding Indigenous perspectives* - *skills in teaching English to second/foreign language learners* - *skills in teaching oral language development (early years teachers)*
3. Enhance teacher expertise and effectiveness	• *Provide high-quality, system-wide Professional Development in the areas of knowledge and skill identified above (for teachers and paraprofessionals)* • *Develop high-quality professional resources to support teacher learning in these areas.* • *Provide (through regions) specialist coaching and interventions* • *Provide quality assessment materials (including diagnostic tests)* • *Provide quality teaching materials (including culturally appropriate)* • *Provide a basis for evaluating commercial intervention programs* • *Provide materials that teachers can share with parents and families*
4. Clarify effective school leadership practices	• *Develop clear specifications of effective school leadership practices, recognising that priorities may be different for schools at different stages in their improvement journeys. The identified leadership practices should include:* - *establishing and leading a school improvement agenda* - *creating a culture of high expectation for all students* - *building and leading a professional learning community* - *analysing and using data to improve student outcomes* - *applying school resources to improve student outcomes* - *leading the implementation of more effective teaching practices*
5. Enhance school leadership practices	• *Provide high-quality, system-wide Professional Development for school leaders in the areas of leadership practice identified above.* • *Create professional learning communities of principals (AEDIs)* • *Provide professional resources to support leadership learning* • *Provide mentors, especially for new, aspiring and struggling leaders*

The five strategic priorities and the accompanying suggestions for how the system might pursue each of these priorities would enable two levels of self-reflection and accountability over the period of the strategy. For example, at one level it could be asked how well the system has performed in 'providing professional resources to support leadership learning' and, at a more general level, how well the system has succeeded in 'enhancing school leadership practices'.

Although Table 3 has been provided only as an example (other strategies could be identified in such a plan), two of the strategic priorities identified here, but not emphasised in the *Prioritising Literacy and Numeracy* document, are important components of any effort to improve literacy and numeracy performances. The first is the clarification of what classroom teachers need to know and be able to do to support improved literacy and numeracy learning. It is proposed that this be done for the system as a whole and with a high degree of specificity. Such a specification would provide a clear point of reference for the planning and delivery of teacher professional development programs and for evaluating the extent to which teachers are implementing effective teaching strategies. An example of an attempt to provide this degree of specificity is the Victorian Department's documents, *Key Characteristics of Effective Literacy Teaching* and *Key Characteristics of Effective Numeracy Teaching* (see excerpt in Appendix 2)[1].

The development of specifications of what teachers need to know and be able to do would parallel the Department's initiative to develop clarity about what students should know and be able to do in literacy and numeracy (the *Diagnostic Net for Transition to Year 9*). Such a specification, if differentiated according to teacher roles and responsibilities (eg, primary; specialist literacy teacher), would provide what is referred to in Table 2 of this report as 'a framework that describes increasing levels of teacher expertise and effectiveness'.

The second strategic priority included in Table 3 but not emphasised in the *Prioritising Literacy and Numeracy* document is the clarification of effective school leadership practices. A starting point for a school system wishing to increase the effectiveness of principals in raising students' literacy and numeracy performances is to identify effective leadership practices (recognising that these may differ somewhat from school to school, depending on their contexts). Again, the specification of desired leadership practices would be best undertaken for the system as a whole, with support for leadership development being provided largely through regions.

One attempt at a system-level specification of effective leadership practices is the Teaching and Learning School Improvement Framework developed with and for the Queensland Department of Education and Training (Masters, 2010). The domains of this framework are summarised in Figure 1. For each domain, current school practices are rated as Low, Medium, High or Outstanding (see

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[1] www.education.vic.gov.au/studentlearning/litnum/

excerpt in Appendix 3). This framework does not attempt to describe everything that highly effective schools and school leaders do, but focuses on practices that have been shown to have a direct positive influence on the quality of teaching and learning.

An explicit specification of desired school leadership practices – whether or not it identifies varying levels of performance, and whether or not it is used as part of an external school review process – has the potential to guide leadership development programs and initiatives.

Strategic priorities 2 and 4 in Table 3 provide the *substance* for strategic priorities 3 and 5. At present, the substance of programs and initiatives to build teacher and school leader effectiveness is largely unaddressed by the *Prioritising Literacy and Numeracy* document. The document proposes to identify 'current effective literacy and numeracy practices in schools' and to 'determine and celebrate what works', and to use the Evidence-Based Practices Framework to guide the development of teacher capacity:

> On-going and on-site professional development is crucial. To build capacity in [embedding rigorous and sustained practices in all classrooms], it is intended to use the Evidence-Based Practices Framework (EBPF) across the Northern Territory as a means of maintaining some quality control over the programs used by the system and by schools. (Department of Education and Training, 2010, 18)

More important than reaching system-wide agreement on a 'teacher professional development model' with four levels:
1. training of facilitators (regional workshops)
2. training by facilitators (on-site learning communities)
3. training of new recruits (orientation and regional workshops)
4. on-site coaches (FTE in schools or mobile teams in regions)
is reaching system-wide agreement on what teachers need to know and be able to do as a result of professional development.

An example of an initiative to build professional development around clearly specified teacher knowledge and skills is the work of the ACER Institute to develop graduate certificates in *Teaching Reading* and the *Assessment of Student Learning* (Appendix 4). These two courses, which include assessment components to evaluate participants' mastery of course content, are being piloted in early 2011.

Finally, telling schools that 'non-negotiables' include the establishment of Professional Learning Communities, whole-of-school approaches, school improvement targets and a culture of assessment are unlikely in themselves to lead to improved literacy and numeracy learning. Strategies of this kind only have meaning and effectiveness when there is first clarity about what students should be learning, what teachers need to know and be able to do to promote student learning, and what leadership practices are most effective in supporting improved teaching and learning.

RECOMMENDATION 1

In the context of the Department's strategic planning to improve literacy and numeracy outcomes:

1a   express all literacy and numeracy strategies as proposed actions of the Department (for which the Department itself will be accountable)

1b   identify a small number of high priority areas of strategic action. These priorities should be essential to the improvement of literacy and numeracy learning and areas in which the Department can make a difference. (Consider the areas identified in Table 3 of this report as possible starting points.)

1c   include in these priority areas the system-wide clarification of what teachers need to know and be able to do to improve literacy and numeracy outcomes and the system-wide clarification of what school leaders can do to support improved teaching and learning (recognising that these may vary with school context)

3   Diagnostic Net for Transition to Year 9

The Department's *Diagnostic Net for Transition to Year 9* has been developed to describe what Northern Territory students are expected to know and be able to do in literacy and numeracy by the end of each year of school from Transition to Year 9. These expectations are captured in five 'continua' described as 'roadmaps' of literacy and numeracy 'milestones' in each of:

- reading
- writing
- oral language
- numeracy

The expectations indicate what is expected of every child by the end of the school year and 'provide an achievement goal that teachers, students and their parents should aim for'. They do not attempt to describe the whole curriculum, but only 'the learning that is expected if students are to successfully progress without targeted intervention through the years of schooling':

> The expectations describe only what is absolutely critical for students to learn in order to successfully progress from one year of schooling to the next and in particular, be able to access the curriculum of the following years.   (Department of Education and Training, 2010b)

The *Diagnostic Net* identifies skills and knowledge that students in Years 1 to 6 need to progress successfully with their same-age cohort. Students in Years 7 to 9 are expected to apply Year 6 skills and knowledge to an increasingly broad range of learning areas and contexts.

The expectations specified in the *Diagnostic Net* 'do not dismiss the individual trajectories of children's learning, nor suggest that all children will meet these expectations no matter what prior learning they bring with them to the learning environment'; however they do set common expectations for all children and 'flag the urgency for children to catch up and keep up'. They also 'provide a standardisation of expectations for students, many of whom are highly mobile and need consistency'.

Anticipated uses of the *Diagnostic Net*
The Department's documents relating to the *Diagnostic Net* anticipate that it will be used in various ways, including as:

- a statement of the intended curriculum ('clarity for every teacher about what literacy and numeracy skills and knowledge children should have learned before arriving in their classroom, what each student needs to learn in their classroom and what students will learn when they leave their classroom');
- a way of prioritising and focusing literacy and numeracy learning;
- a focus for teachers' collaborative planning and discussion;
- a basis for developing quality assessment tasks to determine whether the desired learning has been achieved;

- a basis for identifying the need for intervention for students who have not demonstrated the intended learning; and
- a focus for conversations with parents about what their children are learning and what is expected of them.

Teacher Judgements

It is proposed in the Department's documents that teachers will make judgements about students' achievements in relation to the four literacy and numeracy continua. Teachers will be expected to make a 'yes/no' judgement at the end of first semester each year about 'whether students are "on track" to be able to do what is required by the end of the school year'. Another judgement will be made at the end of the year as to whether the student 'can or cannot' do what is expected:

> This 'yes/no' information should be made available to the school, subsequent teachers of the students, the region and to parents through normal reporting processes... Teachers and schools will generate data about their students who have either met the expectations of haven't.
>
> (Department of Education and Training, 2010b)

At a more detailed level, it is anticipated that Year 1 to Year 6 teachers will use information provided by previous teachers to determine the specific expectations that students have and have not achieved, thereby identifying children requiring assistance. This more detailed analysis will allow teachers to diagnose 'where along the continua students got left behind in their learning'. This information is considered 'critical for middle years teachers who have students in their classes who got left behind in primary schools'.

3.1   Comments

As noted in Section 1, the process of establishing where students are up to in their learning requires clarity about the nature of progress in each aspect of literacy and numeracy: a framework or 'roadmap' that describes typical and intended paths of student learning. The *Diagnostic Net for Transition to Year 9* provides such as framework and, as such, provides a useful specification of an *intended* curriculum in reading, writing, oral language and numeracy for these years of school.

It has not been possible in this review to evaluate the details of the *Diagnostic Net*, but the process that was followed appears to have been consistent with best practice, involving reviews of relevant literature, comparisons with existing frameworks including the new Australian curriculum and expert review and 'validation'.

The intended uses of the *Diagnostic Net* also seem generally appropriate, particularly the use of the continua to guide teacher planning in each year of school and to monitor the progress of individual learners. The continua also should provide a useful frame of reference for teacher conversations about student learning and progress, and for conversations with parents.

I have only two notes of caution. First, although I strongly support the approach underpinning the *Diagnostic Net* (the specification of common expectations for students in each year of school and the provision of differentiated support to achieve those expectations), in any given year of school there is currently enormous variability in students' literacy and numeracy levels. Some students are several years away from meeting Year-level expectations. It will be important that teachers continue to establish exactly where individuals are up to in their learning and provide learning opportunities appropriate to current levels of development. For example, a Year 6 student functioning at the level of a Year 3 student may not be best served by giving them 'more time' to master Year 6 expectations. They may first need time to master foundational skills that are normally part of the Year 3 curriculum. This is not a matter of lowering expectations – the expectation for such a child remains the Year 6 expectation – but a matter of maximising the likelihood of successful learning and future progress by tailoring learning opportunities to each student's current learning needs.

Related to this is the matter of how student learning is to be reported. The proposal to report yes/no outcomes to students and parents at the end of the year introduces the likelihood that some (perhaps many) students will be considered to have 'failed' the year. In some schools most students may 'fail' and 'fail' year after year.

If the proposal is to report yes/no decisions at the level of each continuum (for example, a student has either met the numeracy expectations for the year or has not), it is not clear from the documentation whether a student would have to achieve *all* of the listed expectations (which can number up to a couple of dozen) to be considered to have met the expectations for the year. In any case, there are likely to be many students who progress from being able to demonstrate only some of the expectations to being able to demonstrate many of the expectations during the year. This observation raises questions about how *progress* is best reported (including the progress of students who are performing well below Year-level expectations); how measures of progress might be reported alongside yes/no decisions; and what unintended consequences there might be of reporting yes/no decisions at the levels of the four continua.

My second caution concerns the use of the *Diagnostic Net* as an assessment instrument. While the *Diagnostic Net* is likely to be very useful as a curriculum framework and for informal monitoring of individual progress by classroom teachers, I believe it is limited as an instrument for collecting reliable data on students' literacy and numeracy achievements. The reason is that it depends on teacher judgements about whether or not students have mastered specific expectations. For example, teachers must decide whether or not each student:

- is able to listen to a story and identify whether to combine, take away or share in answer to questions about the story in familiar contexts
  (Numeracy, Year 1)

- knows that different text forms can be read differently
  (Text Forms, Year 3)

- recognises and understands the meaning of an increasing bank of subject specific and precise words and phrases in different contexts (Vocabulary, Year 4)

A yes/no decision about whether a student had met the expectations for the year would require multiple judgements of this kind. It seems unlikely that these judgements could be made with sufficient consistency to enable meaningful comparisons across schools. Although consistency might be improved with teacher training and moderation, it is questionable whether this would be worth the effort and expense; for the purposes of assessing and monitoring students' literacy and numeracy development, more reliable assessment instruments, including NAPLAN, would be preferable.

RECOMMENDATION 2

In relation to the *Diagnostic Net for Transition to Year 9*:

2a use the *Diagnostic Net* for classroom planning and monitoring, but not as an assessment instrument for system purposes

2b monitor for possible unintended consequences of *yes/no* reports to students and parents (especially the possibility of students being labelled as 'failing' year after year)

2c give consideration to ways of monitoring and reporting student *progress* in literacy and numeracy (either to complement or as an alternative to yes/no reporting)

4 School and Principal Review and Improvement

The Department's plans for reviewing school and principal performances are set in the context of its 2006 *Accountability and Performance Improvement Framework*. The Framework was developed to assist the Department to deliver improved results through an explicit accountability and performance system. In an effort to promote a 'culture of improvement', the Framework outlines processes for measuring, planning, monitoring and reviewing performance at the level of the system; schools and major service delivery areas; and individuals:

- measure performance – assess where we are to date
- plan – know where we want to be
- implement, monitor and report – transform intention to practice
- review – appraise our performance
- target assistant, share success – build improvement through assistance and sharing success

Under the Framework, system planning and school and service delivery planning are undertaken on a four-year cycle. Schools and service delivery areas are expected to develop four-year Improvement Plans in line with the broader departmental plan. Annual Operational Plans also are expected. These are intended to identify short-term goals and actions to achieve the four-year Plan.

Strategic School Improvement Plan; Annual Operational Plan
A draft document of the Department with the title *Strategic School Improvement Plan; Annual Operational Plan* specifies that each school's four-year plan and annual plan are to focus on:

- curriculum, teaching, learning and assessment;
- staff development; and
- resource use.

> The Strategic Improvement Plan is the one authoritative document which contains the specific expectation and commitments that will be addressed. It is developed every four years but is continually reviewed and amended annually through the Annual Operational Plan. Progress towards achievement is reported in the School Annual Performance Report.
>
> (Department of Education and Training, 2010c)

Each school's Strategic School Improvement Plan is to include 'improvement goals' set by the school in five areas:

1. Teaching and Learning
2. Wellbeing
3. Participation, Transitions and Pathways
4. Partnerships
5. Leadership

These five Key Results Areas 'provide the framework for monitoring and measuring school performance'. The document observes that measuring

performance over time can provide the school with evidence of the impact of strategies and focused effort; rates of improvement, particularly in comparison to previous performance; and progress towards local, regional, NT and national targets.

Each principal has an annual performance review which is undertaken by the Director School Performance. The review of performance includes 360° feedback, a desk audit of programs and policies, interviews with teachers and staff, as well as council members and students as appropriate.

The draft document provides a table headed 'process for accountability, school and principal performance (Table 4) and also summarises what schools principals are accountable for:

> The bottom line for principal leadership is to maintain a focus on instructional leadership to enhance student progress, achievement and development. Principals create high performing schools by:
> * focusing on students and their learning;
> * focusing on teachers and their learning;
> * building capacity and people power to take charge of change;
> * defining and articulating direction;
> * leading a culture of inquiry and learning;
> * committing to strategies to achieve specific targets;
> * maintaining momentum and urgency; and
> * continually monitoring and evaluating processes, achievement and development.
> (Department of Education and Training, 2010c)

The process for the principal performance review is described in more detail in a separate *Information Sheet*. According to this sheet, the review is to be focused on assessing performance in the eight areas identified in the middle column of Table 4.

> Following the review, a report is completed by the DSP. This report will outline the outcomes to date and recommendations for future action in the eight key areas. A four point scale will be used to rate the Principal's performance in each area.
> (Department of Education and Training, 2010d)

The review was provided with a set of documents designed for use in the principal performance review process. Seven are based on the eight areas identified in the middle column of Table 4 and are designed to assist the Director School Performance in the collection of information during interviews with relevant parties during the principal performance review process:
* Principal Performance Reflection Tool
* School Review Questions – Principal
* School Review Questions – Assistant Principal (Primary)
* School Review Questions – Teachers
* School Review Questions – Community
* Principal Performance Review Tool
* Principal Performance Review Report

One document is based on the ten Principal performance behaviours in Table 4:
- Performance Plan.

Table 4   Process for accountability, school and principal review

Key Results Areas	School Review	Principal Performance
1. Teaching and Learning Leading curriculum, assessment, teaching and learning that results in quality learning outcomes for all learners. **2. Well-Being** Improving the school's ability to meet the needs of all learners and staff through interactions that are mutually supportive and focused on the learning and well-being of all. **3. Participation, Transitions and Pathways** Personalising learning in all phases of schooling to maximise attendance and participation, resulting in further training, learning and employment pathways for all. **4. Partnerships** Working together in productive and mutually supportive ways to develop a strong sense of belonging, achievement and pride in the school. **5. Leadership** Establishing and driving and explicit and localised school improvement agenda.	**1. Student outcomes data** **2. Clear strategic direction** **3. Analysing data for improvement** **4. Positive, collaborative school culture** **5. Use of school resources to improve learning** **6. Building a professional team** **7. Curriculum leadership** **8. Effective teaching**	1. **Be out and about** (close to our people and business) 2. **Know what is going on** (spend regular time communicating and listening) 3. **Act effectively and efficiently** (to solve problems discovered by being out and about and knowing what is going on) 4. **Involve our people** (with parents, community and others through regular programs) 5. **Create interaction** (across areas of the school community to improve links) 6. **Find better ways** (involve people in working out better ways to do things) 7. **Learning and development** (make sure people have appropriate coaching and training to implement core business) 8. **Give and seek regular feedback** (and recognition of performance) 9. **Monitor/manage work conditions** (pay attention to physical and emotional work conditions) 10. **Lead by example** (with consistent high standards of behaviour, ethics and hard work.

4.1   Comments
It is useful to distinguish different purposes for reviewing the performances of schools and school principals. Three key purposes are: school improvement, leadership development and principal appraisal.

1. School Improvement
Continual[2] school improvement is a pre-requisite for continual improvements in student experiences and outcomes. School improvements can take many forms, including improvements in school practices and processes, staff capacity, school resources and infrastructure, governance and internal school structures. School improvement is most likely to occur when there is clarity about what is to be improved; buy-in to the school improvement agenda by the entire school community; and a culture of collaboration, learning and support to achieve improvement.

> School Improvement – Teaching and Learning
> Within the set of improvement strategies that a school can pursue are strategies specifically focused on improving the quality of teaching and learning. For example, the *Teaching and Learning School Improvement Framework* in Figure 1 (Masters, 2010) identifies eight areas of school practice for improved teaching and learning.

2. Leadership Development
As discussed in Section 1.2, a key strategy for school systems wishing to improve student performance is to build the capacity of all principals and school leaders to drive improved classroom teaching and learning. Leadership development is likely to be most effective when it is tailored to individual leaders' learning needs.

3. Principal Appraisal
Annual principal performance reviews are conducted for the purposes of appraising individual performance and informing decisions about renewing or extending performance contracts. This process may involve rating a principal's performance against specified criteria.

The reason for separating these various purposes is to make a distinction between activities that are best treated by the system as *developmental and supportive* and activities concerned primarily with *performance appraisal and accountability*.

The current plan, as reflected in the documents provided to the review, is to use the *Teaching and Learning School Improvement Framework* (TaLSIF) as the basis for the principal performance review process. This Framework consists of eight domains and four performance levels (Low, Medium, High, Outstanding). The Framework has been modified slightly for this purpose, with the incorporation of the 'differentiated teaching' domain into 'effective teaching practices' and the addition of a 'student outcomes data' domain.

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[2] Following Deming, 'continual' improvement is used here in preference to 'continuous' improvement, as used in the draft departmental document.

This planned use of the Framework is not the use for which it was originally developed. The performance levels Low, Medium, High and Outstanding were developed to describe a school's practices, and not as a basis for judging the performance of an individual. While it would be very appropriate to explore and evaluate the contribution a principal is making to the eight domains of the TaLSIF as part of their annual performance review, there are several reasons why it may be preferable not to use the four performance levels as a basis for rating individual principals.

First, there would be value in promoting the (modified) TaLSIF to schools primarily as a tool for school improvement. It could be used for school self-evaluation and as a basis for ongoing conversations within the school community and with the Director School Performance. In this way, the Framework would be seen as developmental and supportive rather than as a tool for evaluating a principal's performance.

Second, the use of the TaLSIF for school-wide self-reflection and improvement sends the message that improvement in the eight areas of the framework is not the responsibility of the principal alone, but is a shared responsibility.

Third, it is important that principals are appraised on performances over which they have control. Low-performing schools may have entrenched practices, low-performing staff and little or no community support. Many of the practices identified in the Framework relate not only to the work of the principal, but also depend on the contributions of other leaders in the school, teachers and, in some cases, parents.

If school practices – rather than principal performances – are judged as Low, Medium, High or Outstanding, then there is the possibility of acknowledging the contributions a principal makes to a school's improvement (eg, from Low to Medium practices). A similar observation can be made in relation to student outcomes data: a principal should be judged on what they are doing to improve student outcome measures rather than the measures themselves (which will be influenced by factors outside the principal's control). Given that improved student outcomes should be the result of a principal's (and school's) efforts, this might be better made the last rather than first domain in the modified framework.

Fourth, experience elsewhere with the TaLSIF suggests that the vast majority of ratings are likely to be Low or Medium. Principals may be more willing to accept that their school's current performance is 'Low' and work to improve that, than to accept that their personal performance as a principal is 'Low'.

It is not clear from the provided documents whether the ten principal performance behaviours in Table 4 are to form part of the principal appraisal process. These may be most appropriately shared informally with principals to clarify expectations and as a basis for self-reflection.

RECOMMENDATION 3

In relation to school and principal review and improvement processes:

3a use the modified *Teaching and Learning School Improvement Framework* with its eight domains and four performance levels primarily for <u>school</u> review and improvement purposes

3b use the four performance levels of the Framework (Low, Medium, High, Outstanding) as a basis for school self-evaluations, but not as a basis for rating individual principals

3c include in principal performance appraisals an explicit consideration of the contribution each principal is making to the eight domains of the Framework

5   Regional Roles and Responsibilities

From 2011, the Northern Territory Department will devolve significant aspects of service delivery and school operations to six regions. Three Executive Directors Schools have been appointed to oversee two regions each:

Table 5 New directorates and regions

DIRECTORATES (three Executive Director Schools)	REGIONS (six Directors School Performance)
Central Australia	Alice Springs Barkly
Arafura	Palmerston/Rural Arnhem
Darwin/Katherine	Katherine Darwin City/Northern Suburbs

The rationale for the Department's regionalisation agenda is that service delivery will be more effective if managed locally:

> Devolution is usually promoted as a more effective methodology for delivering services. This view is often expressed in two ways. Decisions should only be made centrally if they cannot be made locally; and decisions should be devolved as close as possible to the service delivery point. Consequently, any decision to devolve functions or service delivery to the regions needs to be evaluated in terms of their effectiveness and capacity for improvements in outcomes and efficiency.
> (Department of Education and Training, 2010e)

The Department considers that there is clear and documented evidence of improved practices when additional resources are placed in regions to support schools. In particular:
- Directors School Performance are in schools for significant amounts of time and engaging schools in conversations that identify strategies for improvement;
- the Accountability and Performance Improvement cycle is successfully implemented;
- schools comply with policy guidelines and DET requirements;
- financial data are readily available to the Executive Director Schools and Director School Performance;
- policy guidelines are available;
- clarity/documentation is available around processes; and
- directorates/regions function within guidelines.

The regional model also is seen as a way of increasing flexibility to respond appropriately to local circumstances and needs: 'One size or model of service

delivery does not fit all schools and there must be the ability for regions to customize service delivery within broad policy parameters'.

Under the regional model (see Table 6), program management and reporting remains the responsibility of the centre and each Division of the Department is required to 'articulate the priorities/work/expectations that must be delivered by the regions for that Division'. Alignment is seen as a crucial element of the regional model, with a clear 'line of sight' between central DET policy, regional delivery and classroom practice.

Table 6 The Regional Model

Responsibilities of the Centre	Responsibilities of Directorates/Regions
• determining the priorities for the department and for clearly articulating the strategic intent to regions • developing a strong, systemic policy framework • developing a quality assurance framework built around clear expectations, monitoring and reporting guidelines • determining performance requirements and indicators that are built into performance agreements as well as regional and school plans • determining a working budget for the regions and alerting Executive Board /CE to instances where program and budget targets are not being met • some centralized service and project delivery	• implementing government and DET strategic directions • service delivery into schools • providing regular and timely reporting to the centre • school improvement and student outcomes • coordinating service delivery within a budget and meeting financial targets • ensuring strong alignment of effort and connectivity between schools, the region and the centre • complying with DET and government policy, priorities and guidelines • providing a strong and clear DET perspective to all stakeholders in the region

Directors School Performance
The Director School Performance (DSP) is a key position in the new regional model:

> Simply restructuring service delivery and providing additional resources to regions will not bring about improvements in student outcomes. It is vital that DSPs and regional teams engage schools, coach for improvement and acknowledge the importance of data and research in fuelling conversations. DSPs must lead a service delivery model that connects schools, draws on the knowledge and experience of staff in schools and identifies a matrix of activity that will bring about improvement in student outcomes… DSPs are expected to know their schools intimately and to work collaboratively with principals and school communities to bring about improvement. Fundamentally, their role is about mentoring and supporting principals to jointly improve school performance and student outcomes.
>
> (Department of Education and Training, 2010e)

The regional model also involves the creation of a number of new roles to support the work of the DSPs, including Data Analysts and Literacy and Numeracy Coaches.

The review was provided with documents illustrating regional:
- plans for improved service delivery;
- targets for improvement (attendance and NAPLAN); and
- trend data (attendance and NAPLAN data for Indigenous and non-Indigenous students).

5.1 Comments

There are likely to be significant benefits to schools in having greater access to expert support in regional offices. Directors of School Performance and staff in regional offices should be in positions to develop good understandings of individual schools, their circumstances and the special challenges they face. The Department's regionalisation agenda provides an opportunity for more customised service delivery to local school contexts.

However, the ability of the regional model to deliver improved literacy and numeracy learning ultimately will depend on the expertise of regional staff in leading improved teaching and learning practices in schools. Greater regional interaction with schools will not alone produce improved outcomes; improvement will depend on the quality of the support provided by regional offices.

For example, increased data analysis capacity in regions can be expected to significantly enhance capacity to monitor performances and trends over time, to evaluate performances against regional and school targets, to share this information with school leaders, and to improve Territory-wide monitoring and reporting. But targets and monitoring alone are unlikely to improve school attendance rates or student performances. The real potential of data resides in its capacity to inform and change school, and especially classroom, practices. If data analysts are to make a significant contribution to improved outcomes, then their work needs to include on-the-ground support for teachers in using assessment information to track and address student learning needs.

The work of regional office staff will have greatest impact in schools if it is sharply focused on improving the quality of classroom teaching and learning. This will be achieved in part through the support and development of school leaders, but primarily will be achieved through the support and development of classroom teachers. The improvement of teaching practices throughout the region should be a major priority for the Director School Performance and the overwhelming priority for literacy and numeracy coaches.

The alignment of effort from central office to regions to schools and classrooms will be essential to the success of the regional model. Over-delegation to regional offices is a potential risk. So is unnecessary duplication of effort across regions. The regional model is likely to be most effective if it includes a strong role for the centre in setting Territory-wide learning

expectations, providing high-quality classroom resources, providing access to high-quality professional development, and closely monitoring trends and performances across all schools. The Department's *Strategic Plan 2009-2012* anticipates a continuing strong role for DET head office in the development of teacher support materials in English, mathematics, science and history to provide teachers with scope, sequence, standards and teaching practices; NT-wide specialist services for students in need of targeted learning programs; ESL training for teachers in remote schools; and whole-of-Territory diagnostic processes and systems on entry to school and in Year 2.

The role of the centre should include the professional development of key regional staff including Directors School Performance, literacy and numeracy coaches and data analysts. Individuals will be appointed to these roles on the basis of their interests, experiences and expertise, but all are likely to benefit from further high-quality professional learning opportunities. For example, literacy and numeracy coaches are likely to benefit from opportunities to develop deeper understandings of literacy and numeracy learning processes, methods for identifying children's learning difficulties and effective pedagogical strategies. The centre has a lead role to play in ensuring that staff in key regional positions are well prepared and highly effective in their areas of responsibility.

The role of the centre also should include the development and/or provision of high-quality resources for implementation in regions and schools. The literacy and numeracy *Diagnostic Net* is an example of such a resource. The *Reporting and Analysing Achievement Data* (RAAD) tool is another. As noted in Section 1, the recent McKinsey review of the world's most improved school systems found that the most effective forms of support in low-performing schools and school systems often include prescribed teaching and learning materials. There may be a role for DET central office in providing scripted classroom materials aligned with the *Diagnostic Net* and/or the Australian Curriculum for schools wishing to use them. To minimise duplication and to ensure consistency of practice across directorates and regions, DET central office also should coordinate systems and processes for analysing and reporting performance data. Ideally, most standard regional and school reports would be generated automatically, freeing data analysts to work with schools on the interpretation and use of RAAD and other data in school and classroom decision making.

RECOMMENDATION 4

In the context of the Department's regionalisation agenda:

4a maintain a strong role for high-quality, centrally-produced resources that can be implemented within regions (eg, curriculum frameworks; classroom teaching resources; school and principal review materials; data analysis software)

4b provide central training for all literacy and numeracy coaches focused on developing deep understandings of student learning and effective strategies for teaching literacy and numeracy skills

4c provide central training for data analysts, focused not only on the analysis and reporting of school and regional summary data, but also on the effective use of assessment information in day-to-day classroom teaching and learning

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6   Review of NAPLAN Data

The National Assessment Program, Literacy and Numeracy (NAPLAN) assesses all students in Years 3, 5, 7 and 9 in Reading, Writing, Spelling, Grammar & Punctuation and Numeracy. Testing commenced in 2008, meaning that three years of NAPLAN data (2008, 2009 and 2010) are now available for detailed analysis. And because students tested in 2008 (eg, in Year 3) were retested again in 2010 (in Year 5), data are available to study literacy and numeracy gains made by the same cohorts of students over a two-year period.

In addition to the publicly available NAPLAN results, the review was provided with analyses and interpretations of NAPLAN data undertaken by the Department. NAPLAN is providing a very rich source of information that should be useful in informing classroom practices, regional and school programs and leadership, and system monitoring and support.

Any general interpretation of literacy and numeracy performances in the Northern Territory obviously must take account of the unique characteristics of this system, with nearly half of all students living in remote or very remote locations, an unusually high proportion of students living in low socio-economic areas, and a high proportion of students who speak English as a second or other language. More than forty per cent of the student population is Indigenous.

The Department continues to address unusually high rates of school non-attendance. Participation rates in NAPLAN testing were low in 2008 (with only fifty per cent of Year 9 students in very remote locations participating in the tests). Participation rates improved markedly in 2009 to approximate rates achieved elsewhere, but declined again in 2010, due almost entirely to a decline in very remote schools.

Figure 2 provides an overall summary of the NAPLAN performances of Northern Territory students in the first three years of testing (2008, 2009 and 2010). NAPLAN scores are shown here as standardised deviations from the national mean. On average, NT students perform about one national standard deviation below the national mean (ie, around -1.0 in these graphs).

Several observations can be made from these graphs. First, it is generally true that the performances of NT students *relative to the rest of the country* improve between Year 3 and Year 9. Year 3 students in the Northern Territory are generally further from the national mean (ie, lower in these graphs) than NT students in Year 5, who are further from the national mean than NT students in Year 7, who in turn are further from the national mean than NT students in Year 9. In other words, NT students appear to make better average progress during these years of school than students in the rest of Australia. This also can be seen from the gains made by the same cohorts of students over the two-year period 2008-2010. In Reading, Spelling, and Grammar & Punctuation, NT students made greater cohort gains than students in the rest of Australia. These observations no doubt are explained in part by declining student enrolments in

the NT from Year 3 to Year 9. Nevertheless, among students tested, while NT students remain well behind the national mean, there is some evidence of the gap closing between Year 3 and Year 9.
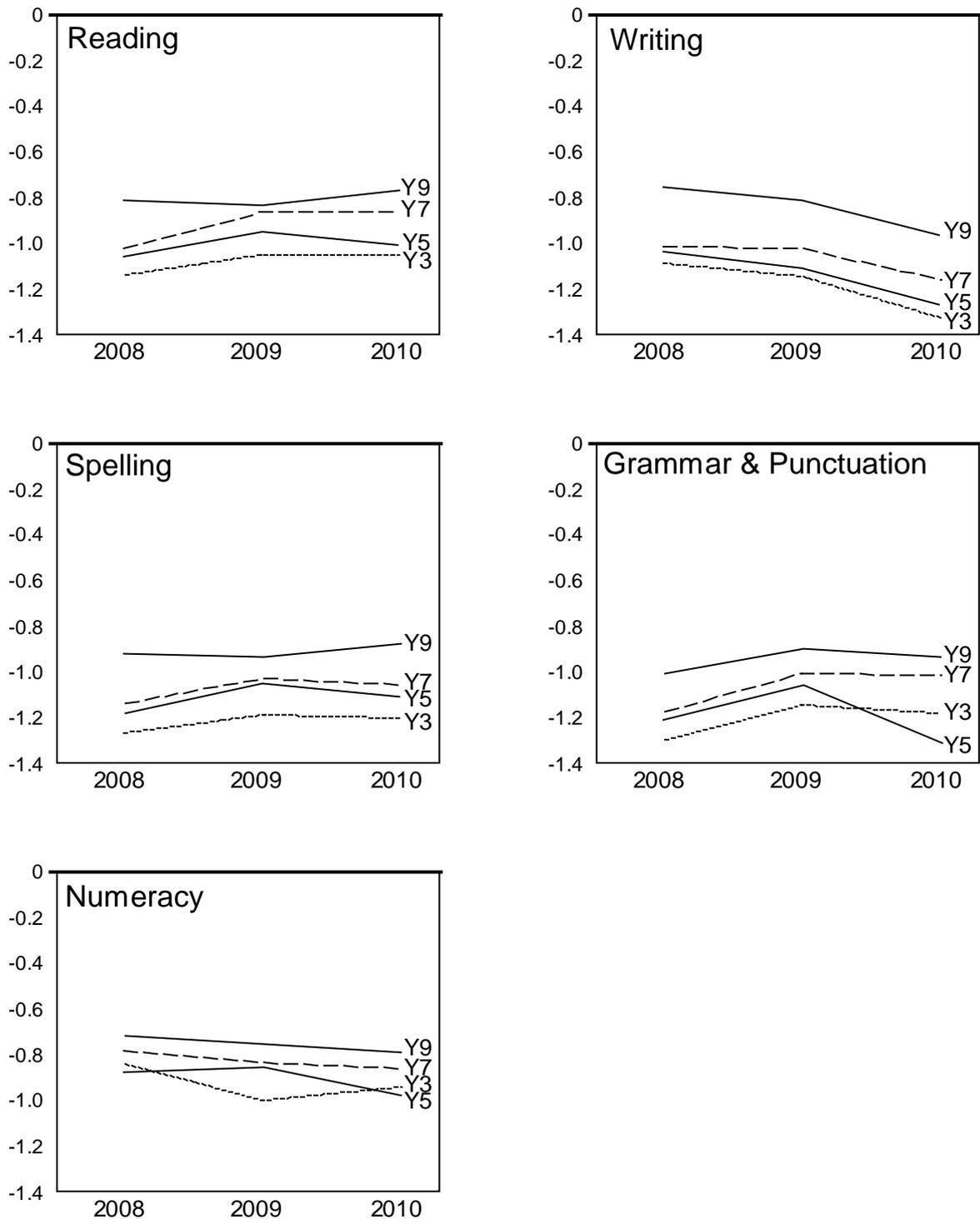

Figure 2   Northern Territory NAPLAN mean scores expressed as standardised deviations from the national mean, 2008, 2009, 2010

Second, NT students tend to perform a little better, relative to the rest of the country, in numeracy than in most aspects of literacy. The greatest lags appear to be in primary Writing, Grammar and Punctuation and Spelling. The gap in average Writing performance between NT students and students in the rest of Australia does not close much during the primary years, but appears to close a little between Year 7 and Year 9.

Third, the relative performance of NT students was relatively stable over these three years, although the relative performance of NT students in Writing appears to have fallen between 2008 and 2010.

Performances of NT Indigenous Students
The national NAPLAN report provides results for subgroups of the student population. Tables 7, 8 and 9 show the percentages of NT Indigenous students, NT non-Indigenous students, and all Australian non-Indigenous students performing below the relevant national minimum standard at each Year level.

Table 7 Percentage of Indigenous students below national minimum standard (Northern Territory, 2009)

	Year 3	Year 5	Year 7	Year 9
Reading	60.1	69.0	63.5	67.7
Writing	54.6	67.9	69.2	73.7
Spelling	70.6	66.1	63.3	70.4
Grammar&P	68.5	72.5	73.0	73.4
Numeracy	59.0	54.5	55.8	54.8

Table 8 Percentage of non-Indigenous students below national minimum standard (Northern Territory, 2009)

	Year 3	Year 5	Year 7	Year 9
Reading	10.1	10.8	7.6	9.3
Writing	4.8	10.0	10.8	15.2
Spelling	13.5	13.3	12.3	14.6
Grammar&P	13.7	11.6	10.6	11.2
Numeracy	7.6	7.2	6.1	5.6

Table 9 Percentage of non-Indigenous students below national minimum standard (Australia, 2009)

	Year 3	Year 5	Year 7	Year 9
Reading	5.2	6.9	5.0	6.5
Writing	3.5	5.7	6.3	10.8
Spelling	6.4	6.4	6.2	9.0
Grammar&P	6.2	6.4	6.5	8.1
Numeracy	4.9	4.8	4.2	4.0

In more than 50 per cent of NT schools, over 75 per cent of NAPLAN test results are below the national minimum standard.

The challenge of raising literacy and numeracy levels among Indigenous students is keenly recognised by the Northern Territory Department. The NAPLAN results reproduced in Tables 7 to 9 are a reminder of the magnitude of this challenge. Significant and sustained improvements in literacy and numeracy in the Territory will depend on continued improvements in outcomes for Indigenous students.

School-Level Analyses
The Department also has analysed NAPLAN results for individual schools. These analyses have identified Provincial NT schools in which the percentage of students performing at or above the national minimum standard exceeds the average percentage in Australian metropolitan schools. Other analyses have identified NT schools with mean scores above national means in Australian Metropolitan schools. For example, in 2008:

- one NT Provincial school exceeded the national Metropolitan means in Year 3 and Year 5 literacy and numeracy
- one NT Provincial school exceeded the national Metropolitan means in Year 7 literacy and numeracy and Year 9 numeracy
- one NT Very Remote school equalled or exceeded the national Metropolitan means in Year 7 and Year 9 literacy and numeracy

The development of the national *My School* website now also enables the identification of NT schools that are outperforming other Australian schools with similar student intakes.

6.1 Comments
An interesting observation made from NAPLAN data is that the gap between Northern Territory students and students in the rest of Australia is greatest in Year 3 and generally reduces the longer children are in school. Extrapolating downwards, it is likely that the gap is greatest on commencing school. Many children in the Northern Territory begin school with low levels of school readiness, including low levels of oral English language competence and limited reading and numeracy skills. National data on five-year-olds collected with the *Australian Early Development Index* (AEDI) in May 2009 show that the percentage of NT children vulnerable and at risk in the language and cognitive skills domain at the commencement of full-time schooling is significantly greater than for the country as a whole (see Table 10)[3].

Table 10 Percentage of vulnerable and at-risk children on school commencement

	Developmentally Vulnerable	Developmentally at Risk
Australia	8.9%	14.0%
Northern Territory	22.4%	17.4%

[3] Centre for Community Health and Telethon Institute for Child Health Research (2009), *A snapshot of Early Childhood Development in Australia – AEDI National Report 2009*, Australian Government, Canberra.

A conclusion from NAPLAN is that progress once children are in school may not be the major issue in the Northern Territory. Perhaps because they are coming off a lower base, school-aged children in the NT tend to make greater average progress in their learning than other Australian children in the same year of school. But a large proportion of children in the Northern Territory begin school seriously behind and never catch up. From Table 7 it is clear that this is a particular problem for Indigenous students, with high percentages of Indigenous students performing below national minimum standards throughout their years at school.

This observation points to a major challenge: to increase levels of school readiness and to close achievement gaps at the earliest possible ages. The Northern Territory Department is addressing this challenge through efforts to provide universal access to quality preschool programs, including mobile preschools for isolated children, and through plans to develop 'easy to access materials to help parents, carers and families develop early literacy and numeracy in their children prior to engaging in formal schooling'. These initiatives should help. Improved literacy and numeracy teaching in the early years of school also will help close gaps. However, the task of ensuring that all NT students are ready for school and do not begin their schooling at a significant disadvantage probably demands breakthrough strategies that have not yet been identified[4].

Documents provided by the Department identify a small number of Northern Territory schools that are performing particularly well in NAPLAN. Data from the *My School* website should be helpful in identifying other NT schools that are 'punching above their weight'. It would be interesting (and presumably instructive) to know more about what these schools are doing to produce their exceptional results. If factors underpinning the performances of these schools can be identified, then there may be ways of sharing these practices with other schools and scaling up effective school and classroom practices across the system.

RECOMMENDATION 5

In the light of NAPLAN data on current literacy and numeracy levels in the Northern Territory:

5a commence a search for new, 'breakthrough' strategies to increase the English language skills and school readiness levels of young Indigenous children

5b undertake a close study of Northern Territory schools that are performing particularly well in NAPLAN in an effort to identify factors underpinning their exceptional performances

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[4] The excerpt in Appendix 5 provides an overview of one strategy currently being explored by ACER and the Australian Children's Television Foundation for building young Indigenous children's English language skills and levels of school readiness.

7   National Partnership Activities

Under the *Smarter Schools* National Partnerships for Improving Teacher Quality, Literacy and Numeracy and Low Socio-Economic Communities, the Northern Territory Department of Education is initiating a range of initiatives designed to improve learning and outcomes in government schools. Of the NT's 187 schools, 130 are eligible for inclusion in the *Smarter Schools* reforms. Within the government sector, the Low SES School Communities NP is being implemented in 97 schools, 67 of which are also involved in the Closing the Gap initiative to improve outcomes for remote Indigenous students.

All NT schools involved in the *Smarter Schools* NPs are required to place specific emphasis on closing the gap in educational outcomes for Indigenous students, particularly in literacy and numeracy and school attendance. Activities under the NPs address a range of pressing issues in Northern Territory schools, including increasing school attendance rates; attracting, developing and retaining high-quality teachers, Indigenous staff and school leaders; implementing evidence-based practices; targeting areas of greatest need within the system; and strengthening partnerships with parents and local communities to improve outcomes for all students.

Under the Low SES School Communities NP, initiatives are being taken to support particular categories of students under the Remote Whole School Reform (RWSR) program; the Engaging Remote Indigenous Students (ERIS) program in very remote schools; the Engaging Urban Students (EUS) program for schools with high proportions of students requiring additional support; and the Supporting Indigenous Residential Students and Families (SIRSF) program.

Among the priorities being pursued in DET schools under the National Partnerships are:
- the development, trialing and evaluation of innovative approaches to addressing the complex and inter-related issues facing remote and very remote schools;
- training in the facilitation of evidence-based approaches to literacy, numeracy and ESL to ensure schools have dedicated, on-site expertise to support teacher professional development;
- school-based part-time coaches to provide ongoing whole-school and in class feedback and professional support to teachers in the delivery of selected evidence-based approaches to literacy, numeracy and ESL;
- on-site delivery of accredited professional development in the explicit teaching of evidence-based approaches in literacy and ESL;
- coaching programs to support school leaders in the effective delivery of quality education services in very remote contexts;

- literacy and numeracy leadership programs which build on outcomes of the Principals as Literacy Leaders (PALL) and Leading Aligned Numeracy Development (LAND) programs; and
- the selection and implementation of literacy and numeracy diagnostic tools and the provision of Assessment for Learning coaches in eligible schools.

7.1 Comments

The *Smarter Schools* National Partnerships are providing important funding and opportunities to address the significant challenges facing schools and school systems in the Northern Territory. The documents provided to the review describe an impressive array of programs and initiatives to build capacity, increase school attendance levels, enhance literacy and numeracy outcomes, and to strengthen relationships between schools and their local communities.

These programs and initiatives include the identification and support of locally-based reform priorities and solutions, particularly in the areas of student attendance and the involvement of parents and local communities in the work of schools. They also recognise a role for regional and central offices in capturing and disseminating best practices. National Partnership programs and initiatives are likely to have greatest impact if they include a balance of learning from local practice and centrally-driven standards and expectations, evidence-based resources, and high-quality professional learning.

Within the variety of activities proposed under the National Partnerships, the activities most likely to lead to improvements in literacy and numeracy outcomes are those that are focused on building the capacities of teachers and teaching assistants to deliver effective, evidence-based classroom teaching. Initiatives to build the capacity of school leaders to drive improvements in classroom teaching also are likely to have a significant impact. Efforts to build the skills of teachers and school leaders to deliver improved teaching need to be planned, structured and firmly grounded in knowledge about effective literacy and numeracy pedagogies. Central and regional offices have a pivotal role to play in ensuring that this remains the guiding focus of work under the *Smarter Schools* National Partnerships.

RECOMMENDATION 6

In the context of the *Smarter Schools* National Partnerships:

6a   maintain a strong focus on programs and initiatives to improve literacy and numeracy teaching and to build leaders' skills in instructional leadership

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Appendix 1

Elements and Key Actions/Deliverables from Literacy and Numeracy Strategy[5]

Element	*Key Actions/Deliverables*	*Timeline*
Literacy	*It is essential that school leaders and teachers know the difference between literacy and English language competence. Professional development will be offered to all teachers and will focus on deep understandings and pedagogic-content knowledge aligned to both. This will provide teachers with skills needed to intervene in timely ways if students are not learning what is expected of their age cohort. It will also ensure that all teachers, including subject specialists, see themselves as playing a critical role in literacy attainment.*	On-going
Numeracy	*It is essential that school leaders and teachers know the difference between numeracy and competence with mathematics. Professional development will be offered to all teachers and will focus on deep understandings and pedagogic-content knowledge aligned to both. This will provide teachers with skills needed to intervene in timely ways if students are not learning what is expected of their age cohort. It will also ensure that all teachers, including subject specialists, see themselves as playing a critical role in numeracy attainment.*	On-going
Literacy and Numeracy	• *Literacy and numeracy policy development commenced*	April 2010
	• *Schools maintain a sense of urgency around literacy and numeracy achievement for every student*	June 2010
	• *Schools have a single, whole school approach to the teaching of literacy and numeracy, informed and focused on student data*	Jan 2011
	• *Schools allocate a significant block of time each day to literacy and numeracy*	July 2010
	• *Schools able to prioritise their curriculum to focus on literacy and numeracy if their students need extra time(negotiated with DSP)*	July 2010
	• *Literacy and Numeracy Expectations continua (T - 9 NET) developed detailing skills needed by all students, the order in which they need to learn them and what the system will expect them to have learned by the end of every school year; all teachers will use this as the basis for their planning across all subject areas*	July 2010
	• *Teaching materials re-aligned and developed to support teachers in using the continua in years T - 9, including culturally appropriate units of work for remote communities*	Dec 2010
	• *VET in School training materials embedding literacy and numeracy developed to support teachers in 7 - 9 in remote communities*	Dec 2010
	• *Evidence-based framework developed to assist schools making decisions about commercial intervention programs; the system will limit the number of these*	July 2010
	• *Diagnostic assessment developed to assist with identification of 'at risk' literacy and numeracy students administered in Term 1 Year 2*	
	• *Literacy and numeracy 'intervention team' in each region*	Jan 2011
	• *Materials developed for parents and families to assist them in supporting young children's early literacy and numeracy development*	July 2010
	• *Materials developed for parents and families to assist them in supporting school-age children's literacy and numeracy development*	June 2011
	• *Professional development for para-professionals*	

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[5] Department of Education and Training, 2010, pp14-15

ESL	• All teachers have professional development in teaching English language to second/additional/foreign language learners	On-going
	• Pre-school, Transition and Year 1 teachers have PD in teaching Oral Language development to ensure all children have strong foundational oracy development in the first years of schooling	On-going
Cultural Competence	• Indigenous staff in schools and Aboriginal education workers have professional development in supporting teachers to understand the cultural backgrounds and knowledge of their students	On-going
	• Schools have access to professional development in embedding Indigenous perspectives in schools	On-going
Assessment Culture	• All teachers have access to professional development in developing quality assessment tasks	On-going
	• All teachers engage in professional development in interpreting data generated by quality assessment (including NAPLAN) to inform planning and pedagogy	On-going
	• Teachers work collaboratively to develop common assessment tasks as the basis for discussion and learning	April 2011
	• Assisted by regions, schools work collaboratively to moderate student literacy and numeracy achievement	On-going
	• Schools use AEDI data to shape Transition and Year 1 programs	Jan 2011
Instructional Leadership	• All Executive Directors Schools create Professional Learning Communities of principals and support their learning and development as change managers	July 2010
	• All school leaders engage in professional learning in analysis of student achievement data to inform school planning, professional development needs of staff	On-going
	• All school leaders engage in professional learning to lead professional learning communities focussed on student achievement	On-going
	• All DSPs working with principals and school leaders to build momentum through short-term wins and achievable targets	July 2010
	• All leaders celebrating small gains in order to build a sense of collective and self efficacy and build and maintain momentum	July 2010

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Appendix 2

Key Characteristics of Effective Numeracy Teaching 7-10[6]

Teacher knowledge

Effective teachers require:

• thorough knowledge of VELS mathematics domain learning focus statements and standards and progression points – levels 3, 4, 5 and 6 to support planning for differentiated teaching

• knowledge of the Mathematics Developmental Continuum P–10, the indicators of progress, teaching strategies and activities within the Continuum

• knowledge of key mathematical concepts in levels 3–6 of the Developmental Overviews

• knowledge of the Big Ideas Linked to the Fractions and Decimals Interview

• knowledge of the particular needs that students may have in relation to English language and numeracy, including students from Koorie, ESL and or low SES backgrounds.

Numeracy focus

Effective teachers determine the numeracy focus by referencing the VELS mathematics standards and progression points.

For students achieving at the expected level, effective teachers:

• develop students' understanding of the meaning and use of digits, natural numbers, integers and rational numbers and the importance of the placement of zero (especially in decimals) and teach students to identify complete factor sets for natural numbers and to express natural numbers as products of powers of primes

• develop students' knowledge of and skill in using fractions and their reciprocals given in the simplest form (e.g. ½ = 5/10 = 15/30) and knowledge of decimal equivalents for the unit fractions (e.g. $1/4 = 0.25$, 1/5 = 0.2) and engage students in evaluating natural numbers and simple fractions given in base exponent form, in calculating the equivalent decimals, ratios and percentages and in using symbols to represent rational numbers

• use students' knowledge of perfect squares when calculating and estimating squares and square roots of numbers and cube and cube roots to a specified degree of accuracy, increase student knowledge of the simple powers of 2, 3 and 5 and teach students to generalise from perfect square and difference of two square number patterns

• engage students in identifying collections of numbers as subsets of integers, natural, rational and real numbers, teach students number sets (empty, power and finite), list the elements of the power set (set of all subsets) of a given finite set and to comprehend the partial-order relationship between these subsets with respect to inclusion, develop students' understanding of ratios as set:set and subset:set comparisons and the use of diagrams and graphs to illustrate the relationships between sets (intersection, union, inclusion and complement)

- teach students to use variables in general mathematical statements and substitute numbers for variables, to identify the correspondence of a function between two sets (one-to-one or many-to-one) and to represent it by a table of values, a graph and by a rule, to describe and specify the independent variable (and its domain) and the dependent variable (and its range) of a function and to construct tables of values and graphs for linear functions and to model various situations

- teach students to apply number properties (commutative, associative and distributive) in mental and written computations, to use exponent laws for multiplication and division of power terms and to become fluent at recognising and manipulating symbols, formulae and algebraic expressions and solving simple equations using tables, graphs and inverse operations

- engage students in building efficient mental, written and technology-based strategies for arithmetic computation and in using technology for a range of purposes

- introduce students to binary notation and the addition and subtraction of natural numbers in binary form
- teach students to identify parallel lines and use the transversals of these lines to calculate alternate, supplementary, corresponding and allied angles

- teach students about the properties of quadrilaterals and congruent and similar triangles and engage students in solving geometrical problems, applying these properties and justifying their results and in explaining geometric propositions

- engage students in visualising and constructing simple 3-D objects from 2-D nets and in using single-point perspective to make a 2-D representation of a simple 3-D object

- teach students to recognise and apply simple geometric transformations of the number plane (translation, reflection, rotation and dilation) as well as combinations of these (including their inverses) and to use precise map references, contour lines, bearings and Cartesian coordinates and more complex map scales

- teach students to measure using suitable units and estimate the accuracy of measurements, to give suitable lower and upper bounds for measurement values in context and to calculate absolute percentage error of estimated values

- engage students in using measurement formulas to calculate area and perimeter of circles, triangles and parallelograms and simple composite shapes and to calculate surface area and volume of prisms and cylinders

- teach students to identify empirical probability as long-run relative frequency, to calculate theoretical probabilities by dividing the number of possible successful outcomes by the total number of possible outcomes and to use tree diagrams to investigate the probability of outcomes in simple multiple event trials

- teach students to use appropriate technology to generate random numbers in the conduct of simple simulations and engage students in analysing the reasonableness of points of view, procedures and results according to given criteria and in identifying limitations and/or constraints in context

- teach students to tabulate, display and organise discrete and continuous data using technology for larger data sets, to represent uni-variate data in appropriate graphical forms, to calculate summary statistics for measures of centre and to make simple inferences based on this data

- teach students to test the validity of statements formed by the use of the connectives (and, or, not) and quantifiers (none, some, all) and to apply these to sets (with one and two attributes) and database searches

• teach students to formulate conjectures, to follow simple mathematical deductions, to develop simple models for real situations, to develop generalisations by abstracting the features from situations and expressing these in words and symbols and to predict using interpolation and extrapolation.

For students achieving above the expected level, teachers should refer to the appropriate VELS standards and progression points.

For students needing additional assistance, teachers should refer to earlier VELS standards and progression points.

Assessment

Effective teachers continuously monitor and track the progress of individual students.

At the beginning of the year, effective teachers:

• use information from transition statements and data including VELS teacher judgements, VCAA On Demand testing and Year 7 NAPLAN results to understand the starting point for each student
• administer and analyse VCAA On Demand Adaptive Testing – a range of computer-based assessments which identify a student's achievement level (use of this tool is to identify the spread of achievement within the class and then to use the progress test to gain more detailed information about individual students)
• administer and analyse Fractions and Decimals Online Interview.

For students achieving below the expected level:

• administer the assessment materials to assess student's multiplicative thinking (Scaffolding Numeracy in the Middle Years) and analyse the assessment outcomes using the Learning and Assessment Framework for Multiplicative Thinking (LAF) and plan for future learning by using learning plans.

Throughout the year, effective teachers:

• schedule and document ongoing assessment to track individual student's progress
• administer and analyse VCAA On Demand Progress tests which are linear tests designed to measure outcomes against the VELS
• administer and analyse the Assessment for Common Misunderstandings for identified students. This assessment task addresses the key areas of number:
   LEVEL 5 – Proportional reasoning, extending what is known about multiplication and division beyond rule-based procedures to solve problems involving fractions, decimals, percent, ratio, rate and proportion
   LEVEL 4 – Partitioning, the missing link in building common fraction and decimal knowledge and confidence
   LEVEL 3 – Multiplicative thinking, the key to understanding rational number and developing efficient mental and written computation strategies in later years
• regularly observe students working mathematically across all dimensions within the class context, particularly during independent numeracy, and document progress against the VELS standards and progression points
• provide students with regular opportunities for self assessment and self reflection
• use the VCAA mathematics assessment maps to help moderate student work
• provide timely and frequent feedback on assessment tasks.

At the end of each semester, effective teachers:

• integrate evidence collected throughout the semester to make on-balance judgements against VELS mathematics standards and progression points.

Planning and Instruction

Assessment data is the starting point for curriculum planning and differentiated instruction.

Effective teachers:

- demonstrate capabilities as described in the e[5] Instructional Model
- dedicate four hours weekly (as a minimum) to explicit numeracy teaching
- use a range of flexible student groupings ensuring appropriate level of differentiated teacher support including whole class focus, small groups, independent activities and whole class reflection and analysis
- organise learning spaces to support differentiated teaching and collaborative learning
- provide independent time so students can practise what they know and act on reflection and feedback, giving opportunities to make knowledge and skills automatic
- develop mathematical language by explicitly introducing new terms and symbols and expecting and encouraging correct use, making connections between language, symbols and materials
- provide opportunities and resources for students to manipulate concrete materials
- structure purposeful, authentic numeracy tasks that allow different possibilities, strategies and products to emerge and encourage higher order thinking skills
- develop numeracy understanding through strategic questioning and feedback by the teacher and explanation of reasoning and methods by the student.

Recommended teaching strategies

Effective numeracy teachers:

- explicitly teach students strategies to approach mathematical problems
- select appropriate teaching strategies including classroom activities after analysis of the Fractions and Decimal Online Interview
- engage students in discussion, reflection and active construction throughout sessions to extend their thinking by building on their contributions and questions and to resolve misconceptions
- use a range of practices selected from the twelve scaffolding practices that meet the learning needs of all students in the most appropriate way possible. These are used throughout the five phases of instruction as described in the e5 Instructional Model.

Selecting materials

Effective teachers select a range of materials that are:

- based on the students' developmental stages and the mathematics being explored
- appropriate to the learning context
- socially and culturally inclusive.

Appendix 3

Levels of School Performance in the 'Analysis and Discussion of Data'[7]

OUTSTANDING The principal and other school leaders clearly articulate their belief that reliable data on student outcomes are crucial to the school's improvement agenda. The school has established and is implementing a systematic plan for the collection, analysis and use of student achievement data. Test data in literacy, numeracy and science are key elements of this plan. Data are used throughout the school to identify gaps in student learning, to monitor improvement over time and to monitor growth across the years of school. A high priority has been given to professional development aimed at building teachers' and leaders' data literacy skills. Staff conversations and language reflect a sophisticated understanding of data concepts (eg, value-added; growth; improvement; statistical significance). Teachers are given test data (including NAPLAN) for their classes electronically and are provided with, and use, software (eg, *Excel*) to analyse, display and communicate data on individual and class performances and progress, including comparisons of pre- and post-test results. Teachers routinely use objective data on student achievement as evidence of successful teaching.
HIGH There is evidence that the principal and other school leaders view reliable, timely student data as essential to their effective leadership of the school. There is a documented school plan and timetable for the annual collection of student outcome data. One or more members of staff have been assigned responsibility for implementing the annual plan, analysing the full range of school data, and summarising, displaying and communicating student outcome data for the school. The school has ensured that appropriate software is available and that the assigned staff have been trained to undertake data analyses. Time is set aside (eg, on pupil free days and in staff meetings) for the discussion of data and the implications of data for school policies and classroom practices. These discussions occur at whole-school and team levels. The school can illustrate through case studies, meeting minutes and project plans how data have been used to identify priorities, take action and monitor progress.
MEDIUM School leaders pay close attention to data provided to them about the performance of the school (eg, NAPLAN results; Year 12 results) and identify areas in which the school is performing relatively poorly or well. Tests (eg, commercially available reading tests) may be used by some teachers, but generally are not used as part of a whole-school assessment strategy. An ad hoc approach exists to building staff skills in the analysis, interpretation and use of classroom data. Software may be used for the analysis of school results, including the performances of priority groups, but analyses generally do not extend to studies of improvement or growth. School data are presented to staff in meetings, but presentations tend to be 'for information' rather than a trigger for in-depth discussions of teaching practices and school processes. Information about the school's performance is communicated to the school community, but may lack explanation or analysis.
LOW There is very little evidence of school leaders' practical use of school-wide student outcome data. There is either no annual data collection plan for the school or the plan is being implemented in a minimalist fashion. The school makes little or no use of tests beyond those that the school is required to use. Teachers do not systematically analyse test and other data for their classes and teachers make little use of data to reflect on their teaching. The school is unable to demonstrate how data have been used in meetings to analyse and discuss current achievement levels and strategies for improvement.

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[7] Masters, 2010

Appendix 4

Example of Course Content – Teaching of Reading[8]

The Graduate Certificate in the Teaching of Reading is designed to provide teachers, curriculum leaders, literacy coaches and school leaders with advanced skills and knowledge to understand, assess and teach effective reading skills.

Through this four-unit course participants will:

- explain the strategic behaviours used by readers before, during and after reading to comprehend texts
- collect and analyse student assessment data on reading
- design and employ a range of explicit teaching strategies in response to assessment information
- develop and implement flexible reading programs to meet the diverse needs of learners
- employ strategies for developing meta-cognitive behaviours in learners
- monitor the effectiveness of teaching strategies used and adapt teaching appropriately
- use a teaching framework to design, select and employ specific teaching strategies in response to learner needs

Unit 1: What does reading ability look like? *focuses on developing a deep understanding of the strategies that effective readers use to comprehend texts.* Participants will examine the process of reading. What do students do to comprehend text at the word, sentence, discourse, topic and dispositional level? What actions and attitudes do they display and how is this knowledge useful for teachers to advance their own effectiveness as a teacher of reading? Participants will explore how they can teach students these comprehending actions.

Unit 2: Assessing and monitoring students' reading ability *focuses on collecting evidence and the developing a reading assessment plan.* Participants will investigate the procedures used in their classrooms and schools to achieve the five purposes for assessing reading and how to use the outcomes to inform their teaching. A range of assessment tools and approaches will be explored. Participants will generate a reading description in terms of the model of reading and describe reading profiles.

Unit 3: Explicit teaching strategies for specific reading skills *focuses on selecting and using the appropriate teaching strategy for the understanding evidence.* Participants will learn specific teaching strategies and how to teach them explicitly and to monitor their effectiveness through ongoing formative assessment of student learning.

Unit 4: A teaching framework for explicit teaching strategies for reading *focuses on using a teaching framework to guide the selection and use of teaching strategies.* Participants will become familiar with the teaching framework and use it to scaffold teaching strategies and to promote students' ability to become effective readers of text.

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[8] Graduate Certificate in the Teaching of Reading, © 2010 ACER Institute

Example of Course Content – Assessment of Student Learning[9]

The Graduate Certificate in the Assessment of Student Learning is designed to develop high level assessment skills and understandings. It is designed for classroom teachers, school leaders and those with leadership roles in assessment.

Through this course participants will:

- Examine personal assessment beliefs, knowledge and practices to better understand the purpose of assessment policies and practices.
- Understand the critical relationship between curriculum, pedagogy and assessment.
- Identify key principles of effective assessment.
- Access, analyse, review and share effective contemporary practice in assessment based on current research.
- Identify purposes of diagnostic, formative and summative assessment
- Understand the multiple purposes and different forms of assessment.
- Identify the types of evidence needed for making valid and reliable judgements about student achievements of learning outcomes
- Design assessment plans that reflect the diverse needs of learners, the purpose of the assessment and the curriculum goals.
- Plan year level assessment programs in line with relevant curriculum programs.

The course comprises four sequenced and interrelated Units.

Unit 1: Assessment to promote learning *focuses on understandings and beliefs about the key purpose of student assessment.* Participants examine the principles and purposes of assessment, understandings of the nature of learning and conditions that support learning, and implications for assessment design.

Unit 2: Assessment activities and tools *focuses on collecting evidence.* Participants investigate the principles of valid, fair, flexible and authentic assessments, the importance of using multiple assessment methods and sources to gather evidence, and strengths and limitations of different assessment activities and tools.

Unit 3: Estimating student achievement *focuses on understanding evidence.* Participants examine the process of estimating student achievement, key observation and judgement types, and issues related to estimating attainment such as data literacy, bias and error, consistency of judgements, moderation and quality assurance, triangulation and on-balance judgements.

Unit 4: Informing the teaching and learning cycle *focuses on using evidence.* Participants examine the key roles of student feedback, monitoring and reporting to inform teaching and learning, and explore case studies related to making evidence-based decisions to promote learning.

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[9] Graduate Certificate in the Assessment of Student Learning, © 2010 ACER Institute

Appendix 5

Using television to promote learning opportunities for Indigenous children

The following excerpt is from a literature review prepared by Michele Lonsdale at the Australian Council for Educational Research. It addresses the importance of early childhood learning, Indigenous learning needs, and the role of educational television programs in improving learning outcomes for preschool-aged children. The review was undertaken to provide an evidence base for a proposal by ACER and the Australian Children's Television Foundation for an educational television program aimed primarily at Indigenous children from three to six years of age.

There is an extensive body of research that shows the critical importance of early childhood in children's learning and development, including for long-term educational outcomes. Based on this research and contemporary theories about child pedagogy, Australia now has a national Early Years Learning Framework to guide educators in developing a foundation for future success in learning. One of the underpinning principles of the Framework is to respect diversity of cultural and linguistic traditions. This means recognising the importance of prior learning, and the role of family and community, in preparing Indigenous children for school. In addition, there are several dimensions that are generally recognised as being fundamental to school readiness, regardless of ethnicity, race or culture. These include physical wellbeing and motor development, social and emotional development, approaches to learning, language development, cognition and general knowledge. An additional dimension for Indigenous students is connectedness to community.

On a range of educational indicators, there is still a significant gap between Indigenous and non-Indigenous children. Of particular concern, is that by Year 3 Indigenous children have lower levels of literacy and numeracy than their non-Indigenous peers and that this gap becomes wider as children move through formal schooling. Participation rates in early childhood programs are lower for Indigenous children than for their non-Indigenous peers. Quality programs that promote engagement with learning at an early age, support home-to-school transition, and recognise the importance of cultural awareness are needed to maximise learning opportunities for Indigenous young people and to give them the solid foundation that early child research shows can make a difference in long term outcomes.

In setting up a national Indigenous television network (NTIV), the Australian government has followed in the footsteps of other overseas governments with Indigenous populations. The primary motivation for these global efforts to establish Indigenous television networks is the strong desire to preserve and celebrate linguistic and cultural traditions and to provide positive representations of Indigenous people as a counterbalance to mainstream media representations. These television networks also provide employment opportunities for Indigenous writers, producers, directors, actors and other media professionals. Studies show that television is playing a critical role in revitalising Indigenous languages and encouraging a sense of pride among Indigenous viewers. While there is evidence to show that Indigenous children are engaged by shows specifically targeting them, more research is needed to identify the kind of learning that takes place and the long-term impact of this early exposure to culturally specific Indigenous programs.

There is a substantial body of research that shows the cognitive, academic and social benefits that can come from a good quality educational program for preschool aged children. This experience can be enhanced for a child when viewing is shared with a parent or caregiver. Adult viewers can also gain in confidence and content knowledge from this co-viewing. While there is little, if any, research into the television co-viewing habits of Indigenous families, there is evidence to show that Indigenous parents and caregivers already share a range of activities with their children, including watching television, videos and DVDs. As a visual medium, television is an appropriate educational tool for use with Indigenous children as can be seen from the popularity of existing television programs in New Zealand and Canada with their Indigenous audiences.

This proposal to develop a children's television program targeting Indigenous children in particular comes at a time when there is strong government support for initiatives aimed at improving educational outcomes for Indigenous children. With the new national curriculum being implemented in 2011, there is an excellent opportunity for the development of high quality educational resources, including a targeted television program, that will assist Indigenous preschool children in the successful transition from home to school, and give them the best possible start to their formal schooling.

Objectives of the television program initiative
There is still a significant gap between Indigenous and non-Indigenous young people on a range of educational performance indicators. Noel Pearson (2010) has argued that '[t]here is a strategically important prerequisite to closing the gap on literacy and numeracy, and that is school readiness and attendance. You can't close the gap on literacy and numeracy unless you first close the gap on school readiness and attendance.'

The primary objective of the Indigenous Children's Television initiative developed by ACER in partnership with the Australian Children's Television Foundation (ACTF) is to improve school readiness for Indigenous children (three-six years). School readiness includes the development of foundational literacy and numeracy skills, engagement in learning, and positive attitudes towards education and school.

Another objective is to strengthen the sense of connectedness that Indigenous children feel to their culture and to other Indigenous communities. Indigenous children entering school 'need to maintain their own culture, identity and self-esteem, as well as to incorporate a new set of cultural values' (Robinson: 16).

A third objective is to provide families and schools with a resource that will promote learning, and encourage interaction around learning, with young children as they view the program. Such a television program could improve learning opportunities for Indigenous caregivers and parents who would be co-viewers with their children.

A fourth objective is to improve the cultural understanding of non-Indigenous children in relation to Indigenous culture. An educational television program that shows cultural diversity can help foster better cross-cultural understanding (Gorn, Goldberg and Kanugo, 1976; Thakkar, Garrison and Christakis, 2006).