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Evaluating the literacy and numeracy programs

A total of 147 schools in NSW participated in a range of programs offered under the National Partnership on Literacy and Numeracy (NPLN). Schools in all three education sectors in NSW (government, independent and Catholic) were identified for participation.

Some of these programs have been developed internally by NSW Department of Education and Communities (DEC), others by the Catholic education sector, and others by external developers. Each program targets literacy or numeracy, taking either an individual student or a whole-class approach, and has been included on the basis of a sound evidence base that supports its potential to achieve the intended improvements.

The NPLN Cross-sectoral Working Group determined that eight of the available programs would be formally evaluated. It was agreed that only programs with eight or more participating schools would be involved in the evaluation.

Independent sector schools are not involved in the NPLN program evaluations.

Four programs are being evaluated by the NSW Department of Education and Communities' Program Evaluation Unit, with evaluation of the remaining four programs outsourced to Urbis Pty Ltd, as follows:

- the four literacy and numeracy programs developed by organisations outside education systems are being evaluated by the Student Evaluation and Program Evaluation Bureau
- literacy and numeracy programs developed within education systems (three programs) are being evaluated by an external evaluator, Urbis Pty Ltd.
- *MULTILIT* is being evaluated by Urbis Pty Ltd.

Program Evaluation Unit

Accelerated Literacy
Individual Learning Plans
QuickSmart (numeracy)
Reading to Learn

Urbis Pty Ltd

Focus on Reading 3-6
Making Up Lost Time In Literacy (MULTILIT)
Mindful Learning, Mindful Teaching
Taking Off With Numeracy (TOWN)

The purpose of the program evaluations is to assess the effectiveness of the selected literacy and numeracy programs, as defined in the Terms of Reference.

Terms of Reference

The Terms of Reference for each program evaluation involved:

- an assessment of the effectiveness of the program
- an assessment of the extent to which the program achieves its goals in an efficient manner, and where applicable, addresses the mandatory reform elements of the National Partnership Agreement on Literacy and Numeracy, which are:
 - effective and evidence-based teaching of literacy
 - strong school leadership and whole school engagement with literacy
 - monitoring student and school literacy performance to identify where support needed
- an assessment of the extent to which the program has improved the educational outcomes of Aboriginal students
- an investigation of the most effective ways for schools to be supported to participate in the evaluation and for the reforms to be incorporated into school practice.

Student Engagement and Program Evaluation (SEPEB)

The following programs were evaluated by the Program Evaluation Unit of the Student Engagement and Program Evaluation (SEPEB):

- *Accelerated Literacy*
- *Individual Learning Plans*
- *QuickSmart* (numeracy)
- *Reading to Learn*

Evaluation Methodology

All program evaluations employed a mixed method design drawing on both quantitative and qualitative components. The evaluation methodology comprised the following components:

- knowledge review - a review of program documentation relating to each program
- stakeholder interviews with program developers and program funding directorates, including Aboriginal Education and Training Directorate
- online survey of teachers in all schools that implemented each program
- visits to a sample of schools, to conduct interviews and focus groups with school principals, leaders, teachers, students, parents and community
- analysis of school documentation including school Literacy Plans and Annual School Reports
- analysis of National Assessment Program - Literacy and Numeracy (NAPLAN) and National Partnership on Literacy and Numeracy (NPLN) assessment data.

The methodology was approved by the NPLN Program Evaluation Reference Group (PERG). Each of the interview and observation schedules was developed in consultation with the expert members of the PERG.

Limitations of the methodology

The NAPLAN data can only be viewed as a preliminary and incomplete set because of the program timeframe. The variation in length of time students have been exposed to the program is accentuated by the staged introduction of the program, and teacher training, that took place in many schools. EMSAD has identified a number of limitations that may impact on the validity of findings from the analysis including: considerable student mobility in schools; small sample sizes for some comparison groups; the use of these same programs in other NSW schools (not funded under the NPLN); and the lack of a comparable control group against which to benchmark results for NPLN schools.

The use of qualitative method allows teachers', students' and parents' accounts of their experiences with the program to be presented for interpretation by others.

Attribution

Concurrent with the introduction of each whole-class program, schools were required to implement a program targeting individual students at greatest need of support. A challenge exists in attributing effectiveness to any one program or intervention, and in isolating that effect from other influences in classrooms and schools.

Accelerated Literacy

Twenty-eight National Partnership schools chose to implement *Accelerated Literacy* as their whole-class intervention. Many of these schools have a high proportion of Aboriginal students.

Accelerated Literacy, developed by Brian Gray and Wendy Cowey, is a research-based K-12 literacy teaching methodology designed to be implemented with whole-class groups. It claims to improve the literacy outcomes of Aboriginal students at an accelerated rate, while improving outcomes for all students in the class.

Accelerated Literacy leads learners through intensive exploration of rich, age-appropriate texts using an explicit and systematic sequence of teaching strategies. The program developers stress the importance of using narrative texts as the starting point to engage students, particularly Aboriginal students.

Twenty-eight public schools, across seven regions, implemented *Accelerated Literacy*. Of these, seven schools participated in the qualitative field visit component of the evaluation. Survey responses were received from 294 staff from 26 schools.

No Catholic Education Commission schools chose *Accelerated Literacy* as their whole class intervention.

Executive summary

Evidence from all data sources indicates that student learning outcomes have been observed to improve for all or most students. This is more strongly supported by teachers', parents' and students' impressions of effective learning than by broad-scale testing measures.

In all but one school, *Accelerated Literacy* was not the sole literacy intervention. It is acknowledged that it is difficult to attribute any improvement to the *Accelerated Literacy* approach alone.

Other major findings relate to the implementation of the program, impacts on teacher work practices and on the school as a whole, and issues of sustainability. These are detailed in the following sections.

Implementation of Accelerated Literacy

Principals highlighted the importance of being able to choose the program to be implemented within the school. This was the first step in building strong support for the intervention, both amongst teachers and throughout the school community.

In cases where the decision was made at a regional level there was more likelihood of teacher resistance to the intervention, at least initially.

Training model

The majority of schools implementing *Accelerated Literacy* opted to train all teachers in the school. Class teachers were involved in up to six days of program training, facilitated by certified DEC regional trainers or private training providers. A number of schools chose to train relief teachers, temporary and long term casual staff, as well as School Learning Support Officers. Occasionally parents were also involved in a level of training.

The training was offered in blocks of two days with a number of weeks between each block, usually over a term. Teachers commented that this approach was helpful, in offering a combination of training days and in-school practice and support.

Accelerated Literacy

NPLN Executive Summary and Key Findings

Organising attendance at the training days presented several challenges: the anticipated disruption to classes if all teachers attended training at the same time; locating sufficient casual teachers to provide relief; and the cost of relief. To minimise these difficulties, some schools opted to train all teachers on school development days or on Saturdays. Others chose to train small teams, over a longer period of time. This staged approach resulted in some classes or stage groups being targeted early in the partnership whilst others did not receive exposure to the program until much later.

Teachers were generally very satisfied with the training received through the DEC regional trainers. Private trainers, on the other hand, were found to be costly and rigid in their approach. The differences in provider training in individual schools led to divisions in attitudes towards *Accelerated Literacy* and affected the cohesiveness of the implementation.

Most teachers indicated that the formal training provided a good introduction to the approach, irrespective of the training model they experienced. They suggested that continued in-school professional learning was just as important in equipping them to achieve effective results with their students.

On-going support

Some schools chose to train in-school tutors which decreased cost and organisational difficulties for initial training, and set up an effective on-going support system for teachers. Partnership resources were frequently used to provide relief from class for tutors, to support teachers in class, and for stage groups of teachers to work collaboratively on programming and resource development.

Resources

The recommended resources were seen as valuable assets to school literacy programs. Principals and teachers particularly appreciated the flexibility granted to schools to use the NPLN funding to meet local needs. Some schools chose to invest in ICT equipment, others chose assessment materials, class sets of texts and consumables required for student activities.

Effects for students

Both data sets (NAPLAN and NPLN assessments), demonstrated gains for all student cohorts at *Accelerated Literacy* schools. A range of limitations on the reliability and validity of results observed in these data sets have been outlined in this report; these should be considered when drawing conclusions from the results discussed.

Principals, school leaders, teachers, students and parents were all extremely positive about the impact of *Accelerated Literacy* on student reading outcomes.

Approximately two thirds of teacher respondents to the survey said *Accelerated Literacy* has improved reading and comprehension skills for most or all students. In the remaining third, most said some have improved while very few respondents said no students improved.

Two thirds of teacher respondents to the survey said the program overall is effective or extremely effective and has also improved general literacy outcomes for most or all students.

Students were also able to identify these improvements. Parents commented mainly on the increase in their child's reading confidence and enjoyment, as well as benefits observed with general engagement with school.

Outcomes for Aboriginal students

Aboriginal students responded positively to *Accelerated Literacy* lessons with most asserting they had made improvements in their reading. NAPLAN data indicates that gain scores for Aboriginal students involved in *Accelerated Literacy* were higher than those for non-Aboriginal students. NPLN assessment data also indicates that improvements for Aboriginal students were higher than those for non-Aboriginal students.

Analysis of teacher comments suggests that they consider *Accelerated Literacy* to be as effective for Aboriginal students as for non-Aboriginal students. A number of teachers commented that texts suggested by the *National Accelerated Literacy Program* web site (NALP, 2007, 2009) were culturally appropriate for their Aboriginal students, promoting greater connection with the texts and with literacy lessons in general.

Several principals indicated that attendance rates for Aboriginal students had improved since the introduction of *Accelerated Literacy*.

Teacher perspectives

In schools where all staff were trained in *Accelerated Literacy* there was a common feeling of being able to share, support, collaborate and plan towards the same goals. Overall, teachers commented about the effectiveness and benefits of incorporating the *Accelerated Literacy* approach into their teaching practice, across the curriculum.

Key points found in the evaluation:

- generally teachers understand the principles of the approach extremely well.
- almost all respondents said the *Accelerated Literacy* training modules are a useful reference.
- most teachers have increasingly collaborated in planning units of work with other *Accelerated Literacy* teachers.
- nine out of ten respondents said that *Accelerated Literacy* has improved the way they teach literacy in their classes.
- seven out of eight respondents would recommend the *Accelerated Literacy Program* to a colleague.
- many teachers felt there was a degree of flexibility with the approach whilst still maintaining the fidelity of the *Accelerated Literacy* methodology.

School staff consistently reported positive outcomes following from their participation in *Accelerated Literacy* training and delivery.

Impacts on whole-school practices

The introduction of *Accelerated Literacy* is reported to have an effect on practices across the school as a whole. The key impacts identified by principals were:

- increased commitment and enthusiasm by teachers
- high levels of consistency in literacy teaching across all classes
- increased leadership capacity throughout the school
- use of quality assessments by teachers and understanding of SMART data to assist in identifying appropriate support
- increased staff collaboration, planning and collegial trust
- improvements in student behaviour and engagement with school.

Accelerated Literacy

The most pleasing outcome noted by many principals and teachers was the influence of the overall changes in school culture and tone, on improving community attitudes towards the school.

Sustainability

The factors identified as being critical to the sustainability of *Accelerated Literacy* in schools beyond the funding period include:

- ongoing commitment and support from the school principal and leadership team
- embedding changes in teacher practice, with support for ongoing collaboration, planning, unit development and lesson study
- whole-school (K-6) approach leading to ease of transition from year to year for students, and consistency for teachers
- ensuring a strategy for ongoing professional learning and training of new teachers, including indication of on-going support for the program from DEC regions.

The majority of schools and school staff were confident that *Accelerated Literacy* could be sustained beyond the funding period, and a number of schools were able to articulate plans for doing so.

Section findings

Implementation key findings

- Training in *Accelerated Literacy* for staff in schools was undertaken by a number of providers. Staff claimed that provider training was varied and had an impact on teacher understanding and delivery practice of *Accelerated Literacy*.
- Training by DEC regional trained tutors was efficient and cost effective as opposed to the high cost of the private providers.
- Many teachers commented that training as a group was effective in promoting collegial support as the program was introduced across the school.
- Most principals and teachers agreed that training all staff in the school led to greater consistency, embedding of effective practice and better results for students.
- Most principals, teachers and parent communities agreed that the implementation of the literacy approach across the whole school was far more effective than using it exclusively with particular stages.
- Most principals and teachers agreed that in-school trained tutors and mentors provided the most effective continued support.

Effects for students key findings

- NAPLAN and NPLN data indicates that minor gains in reading scores were observed at *Accelerated Literacy* schools for both Aboriginal and non Aboriginal students.
- Majority of teachers concludes that *Accelerated Literacy* is effective for students, regardless of ability, gender, or cultural background.
- Teachers concluded that reading improvement could be attributed to the program features: background knowledge scaffolding, text selection, examination of author purpose and scaffolded questioning techniques.
- Most students believed that their reading skills had improved through *Accelerated Literacy*.
- Parents commented that their children's text selection was now more thoughtful and age appropriate and in addition, enjoyment had increased.

Teacher perspectives key findings

- Teachers have an increased theoretical understanding of the interrelationship of all aspects of literacy, especially reading and writing.
- Teachers have increased knowledge and confidence in identifying student needs through data analysis.
- There is increased teacher confidence in capacity to teach reading at the same stage level to the whole class.
- Teachers indicated there was now increased professional dialogue. Sharing of ideas and resources has increased.
- Teachers have increased capacity to use newly learned AL strategies in other subject areas.
- Teachers have a renewed enthusiasm for teaching and their capacity to use newly learned AL strategies in other subject areas.

Impacts in schools key findings

- There is a high level of consistency of *Accelerated Literacy* practice across all classes.
- Leadership capacity has increased throughout the school.
- Teachers are more willing and able to contribute to whole-school literacy planning and to participate in whole-school monitoring of student performance through the use of data.
- *Accelerated Literacy*, combined with the other programs of the NPLN has produced notable changes in school culture. Most importantly, teachers have demonstrated increased commitment and enthusiasm, and collegial trust has increased in all schools.
- There are mixed views on how *Accelerated Literacy* may be sustained beyond the period of the NPLN. A range of strategies are proposed for assisting the ongoing success of the program.

Individual Learning Plans

The development of an *Individual Learning Plan (ILP)* provides targeted intervention focusing on student's individual strengths and areas for development, in order to raise the literacy achievement of at-risk students.

Teachers plan, monitor, manage, and evaluate student achievement to identify specific learning needs and appropriate teaching and learning intervention strategies. Ongoing monitoring of student progress provides data to track learning and inform decision making regarding content, learning strategies employed, allocation of time for instruction and practice, and the environment in which the intervention is conducted.

Seven public schools developed and implemented *Individual Learning Plans* as their individual literacy intervention. Of these, three schools participated in the qualitative field visit component of the evaluation. Survey responses were received from 36 staff from seven schools.

No Catholic Education Commission schools chose to develop *Individual Learning Plans*.

Executive summary

There was a consistent view across all schools that *Individual Learning Plans* have improved reading outcomes for all or most students. Very few respondents said that no students improved. In the majority of schools, *Individual Learning Plans* was not the sole literacy intervention.

It is acknowledged that it is difficult to attribute any improvement solely to any *Individual Learning Plan* program.

Other major findings relate to the implementation of the program, impacts on teacher work practices and on the school as a whole, and issues of sustainability. These are detailed in the following sections.

Implementation of Individual Learning Plans

Each of the seven schools implemented a literacy program as their whole-class intervention, and as a consequence the *Individual Learning Plans* were literacy-based.

Many schools had been implementing *Individual Learning Plans* prior to the National Partnership. Generally teachers had prior experience in the development and implementation of individually-designed student interventions. Schools undertook needs-based analysis to determine the structure of and target groups for the program. Schools worked closely with their school education directors and regional consultants to determine best approaches. Due to the unique needs of each set of students, the plans developed were varied in approach.

The most obvious variations were evident in:

- model for providing targeted activities for identified students;
- selection, qualification and management of tutors or personnel working with individual students
- provision of training to tutors and others involved in the implementation of the *Individual Learning Plans*.

Implementation models

Intervention was required to address the specific learning needs of students experiencing difficulty in reading and should be evidence based, data driven, systematic and intensive. Intervention approaches did not necessarily require one-to-one instruction.

Individual Learning Plans

The range of implementation models observed in each setting included:

- targeted *withdrawal* of a small number of at-risk students, as identified through NAPLAN and NPLN assessments from Years 3 to 6.
- targeted *in-class intervention* with *limited withdrawal* of students, using a school-designed rubric, Years 3 to 6.
- targeted *withdrawal* and *in-class group* interventions addressing common skill needs
- *in-class work* in groups with common needs based on a whole-school, Kindergarten to Year 6 approach, identifying needs of the total school population as well as each individual student.

Table E1 sets out a summary of school models for Individual Learning Plans, showing commonalities and variations in key aspects of the programs.

Table E1: Summary of Individual Learning Plans implementation models

Organisational model	Year level	Tutors/teachers	Professional learning
Targeted <i>withdrawal</i> of a small number of at-risk students	Years 3-6	Qualified teachers, mostly retired	Specific program training provided by Region
<i>In-class intervention</i> and <i>withdrawal</i> of individual students	Years 3-6	Class teachers, SLSO and other support teachers	Training in use of the school-based rubric; specific program training as required
<i>Withdrawal</i> of several groups of students, over time	Years 3-6	Community volunteers	Minimal training provided
<i>In-class work</i> in groups with common needs	Kindergarten-Year 6	Class teachers and various support teachers	School-based training in aspects of quality literacy teaching

Tutors

Many schools utilised existing support staff or parent or community volunteers for program delivery. Schools had the discretion to use funds to employ external tutors if that better suited the needs of their school and their students. Often these were qualified teachers, many of whom were retired.

In all models, Individual Learning Plans were most frequently developed by classroom teachers in consultation with specialists.

Professional Learning

There are no requirements for formalised training of staff delivering *Individual Learning Plans*. It was up to schools to decide how teachers, support staff and tutors would be trained and by whom. As shown in Table E1, several schools relied on school-based professional learning.

Where further training was required, schools sought advice from their region's NPLN Program Facilitator and Literacy Consultant. As a consequence, costs associated with further training were varied and dependent upon each school's need.

Effects for students

In both data sets (NAPLAN and NPLN assessments), slightly higher reading score gains were achieved than for students across most other NPLN literacy focus schools. A range of limitations on the reliability and validity of results observed in these data sets have been outlined in this report; these should be considered when drawing conclusions from the results discussed.

Individual Learning Plans

Principals, school leaders, teachers, students and parents were generally positive about the impact of *Individual Learning Plans* on student reading outcomes, as well as on other components of literacy and other key learning areas. Improvements for students were also observed in other areas such as:

- enjoyment in reading
- improvements in reading fluency
- improved social skills and behaviour
- transfer of skills learnt to other KLAs
- enhanced attitudes to homework.

A high number of students in schools that used a withdrawal approach commented that they felt they were missing out on learning activities both in literacy and other KLAs. A small degree of stigmatisation was reported by students, also aggravated by withdrawal from class. Some teachers were equally dissatisfied with students withdrawn from class, and it was necessary to negotiate and plan with *ILP* tutors to ensure minimal disruption.

Students were able to identify improvements in their reading. Parents commented on the increase in their child's reading confidence and enjoyment, as well as improvements in general engagement with school.

Outcomes for Aboriginal students

Aboriginal students responded positively to *Individual Learning Plans* with most suggesting they had made improvements in their reading.

The majority of teachers surveyed indicated improvements for Aboriginal students in general literacy outcomes and in reading and comprehension skills. NAPLAN data indicates that gain scores for Aboriginal students involved in *Individual Learning Plans* were similar to those for non-Aboriginal students in both cohorts. NPLN assessment data indicates that the gain scores for Aboriginal students were slightly higher than those for non-Aboriginal students.

Analysis of comments from teachers at schools visited indicates that *Individual Learning Plans* are as effective for Aboriginal students as for non-Aboriginal students.

Teacher perspectives

School staff consistently reported positive outcomes in teaching practice as a result of training and implementing *Individual Learning Plans*. Generally teachers commented that they:

- had become more reflective on their teaching practice,
- feel more confident in the use of data to identify student learning needs and inform planning, and
- focus more on specific literacy skill sets.

Impacts on schools

The introduction of *Individual Learning Plans* as a school literacy focus is seen to have had a positive influence on schools, not only in terms of student outcomes but also in terms of school culture. The key impacts identified by principals were:

- teachers being more active participants in the learning process
- better use of data and accountability
- greater professional dialogue among staff
- greater consistency with teaching strategies for the individual students across the school
- greater involvement by parents and the community in educational outcomes and school planning.

Individual Learning Plans

Factors leading to success

A number of factors were identified as contributing to the overall success of Individual Learning Plans. These include:

- the quality and consistency of *Individual Learning Plans* tutors and support staff
- strong school leadership and commitment to literacy improvement
- the availability of funding to allow in-school coordinators and mentors appropriate relief to maintain professional learning and support
- regular monitoring of student progress using quality school based assessments and SMART data
- minimising disruption to general class participation for students.

Sustainability

A number of schools indicated that *Individual Learning Plans* are a very intensive method of teaching, with best results occurring when undertaken on a one-to-one basis. As a result they may well be difficult to sustain on a long term basis.

Overall sustainability of *Individual Learning Plans* in NPLN schools will rely upon:

- ongoing commitment and support from the school principal and leadership team
- embedding new practices for teachers, particularly in ongoing data analysis, collaborative planning, and unit development
- ensuring mentors are available within the school for future training and professional development.

The majority of school staff were insistent that they would like to see the continuation of *Individualised Learning Plans* for their at-risk students. Funding to allow for teachers relief to develop *Individual Learning Plans*, for purchase of resources and for employment of the extra staff required, was seen as the major impediment to sustainability.

Section Findings

Implementation key findings

- Each school developed a locally designed *Individual Learning Plan* program to suit the needs of the school, and the specific needs of the targeted students.
- Costs of implementation were high where schools employed extra staff to support teachers in the classroom or to withdraw students to deliver the program.

Effects for students key findings

- In both data sets (NAPLAN and NPLN assessments), gains in mean reading scores were observed for all student cohorts at schools implementing *Individual Learning Plans*.
- Four out of five teacher/tutor respondents in the online survey said *ILPs* have improved reading and comprehension skills for most or all students. The other respondents said some of the students improved their skills. No respondents said that no students improved.
- Principals, school staff and parents reported observed improvements for students in other aspects of literacy, and in achievement in other Key Learning Areas.

Teacher and tutor key findings

- Most respondents said *Individual Learning Plans* have improved the way they teach literacy. A small proportion disagreed.
- All respondents said that assessments for *ILPs* provide evidence of where support is needed. Most respondents use student assessment folders, with three quarters using the folders for all students.

Individual Learning Plans

NPLN Executive Summary and Key Findings

- Teachers commented that tracking and monitoring individual students allowed them to intervene when needed. Evidence for intervention needs and improvement in skills was now based on quality data rather than on observation.
- All respondents said goals and activities chosen for *Individual Learning Plans* are related specifically to students' background and learning needs.
- For nine out of ten respondents, there was a Teacher Coordinator at the school who played an active role in ensuring the Individual Learning Plans were supported.
- All respondents said staff in their school are able to support them in the development of *Individual Learning Plans*.

Impact in schools key findings

- All staff are more active participants in the learning process and are engaging in greater professional dialogue.
- Staff are more accountable and are using data to inform practice.
- There is greater consistency with teaching strategies for the same individual students across the school.
- Students are taking ownership of their learning and goal setting.
- Increased student engagement, improved behaviour and attendance were observed in many cases.
- Parents and the community have become more involved in school planning in many cases.

QuickSmart Numeracy

The *QuickSmart* suite of programs has been developed by the University of New England to address both literacy and numeracy needs of middle years students (Years 5 to 8). Only the numeracy component was offered as part of the National Partnership on Literacy and Numeracy. For the purposes of this report, *QuickSmart* will be understood to refer to the numeracy program only.

QuickSmart is a basic skills intervention designed for students who demonstrate persistently low achievement. The program aims to improve students' ability to easily and quickly recall number facts and perform basic computation skills, referred to as 'automaticity'.

QuickSmart is a research-based program that is supported, resourced and built around a professional learning program for principals, supervising teachers, teachers and teacher aides. The program emphasises both deliberate practice and strategy instruction in basic mathematics. In the *QuickSmart* program, pairs of students participate in 30-minute lessons, three times a week for 30 weeks.

Thirteen public schools, across four regions, implemented the *QuickSmart* program through participation in the National Partnership on Literacy and Numeracy. Of these, three schools participated in the qualitative field visit component of the evaluation.

One Catholic Education Commission school chose *QuickSmart* as their individual intervention program for numeracy, and was included in qualitative field work.

Executive summary

Evidence from all data sources indicates that student learning outcomes in numeracy have improved for students engaged in the *QuickSmart* intervention. This effect is more strongly supported by teachers', parents' and students' impressions of effective learning, than by broad-scale testing measures.

Other major findings relate to the implementation of the program, impacts on teacher work practices and on the school as a whole, and issues of sustainability.

Implementation of *QuickSmart* Numeracy

Ease of implementation, resources and assessment software were instrumental in schools' decisions to implement *QuickSmart* as their individual intervention.

Program choice and selection of students

Schools targeting numeracy as their NPLN programs had only two individual-student interventions to choose from: *Taking Off With Numeracy (TOWN)* and *QuickSmart* Numeracy. Several schools were already implementing *QuickSmart* Numeracy at the commencement of NPLN, so chose to continue and expand the program.

In each school, places in the *QuickSmart* program were limited. Selection of participants was usually based on perceived need, determined by NAPLAN or other assessment data. Concerns were raised in several schools about the appropriateness of this method, suggesting that discussions with teachers as to who might benefit most, should also be used to inform the decisions.

Staff and training

Finding suitable tutors was regarded as the critical influence on the success of the program. Some schools chose to re-direct existing school support staff to act as *QuickSmart* tutors others employed tutors, often parents from within the school community.

QuickSmart Numeracy

NPLN Executive Summary and Key Findings

Teachers and tutors participated in training provided by the *QuickSmart* SiMERR group, which included three, two-day sessions for teachers and support staff. A one-day workshop was also provided for principals. This training was seen to be effective, although expensive.

Some support was provided to schools by the National Centre of Science, Information and Communication Technology and Mathematics Education for Rural and Regional Australia (SiMERR) at the University of New England, as well as by regional and diocesan consultants. The level of support available was determined by each sector on a regional or diocesan basis.

The *QuickSmart* Cognitive Aptitude Assessment System (CAAS) was seen by students as engaging, as well as providing useful feedback on student progress to both staff and students.

Managing *QuickSmart*: learning spaces, computers and timetables

The role of the *QuickSmart* coordinator was critical in solving challenges around access to suitable rooms and computers, and in creating timetables that provided continuity for students, and balanced student's time away from classes with the number of sessions each tutor could do in a day or week.

Effects for students

Both data sets (NAPLAN and NPLN assessments) demonstrated improvement in numeracy performance for students in *QuickSmart* schools. A range of limitations on the reliability and validity of results observed in these data sets have been outlined in this report; these should be considered when drawing conclusions from the results discussed. As the majority of students participating in *QuickSmart*, are in Years 5 or 6, the influence of *QuickSmart* on student performance is highly unlikely to be evident in these results.

Principals, school leaders, teachers, students and parents all identified positive impacts of *QuickSmart* on student learning outcomes in numeracy. Improvements were also reported in other aspects of learning, such as: enjoyment of and engagement in numeracy activities; greater willingness to participate in class activities; improved social skills and behaviour and better attitudes to homework.

Outcomes for Aboriginal students

Both data sets (NAPLAN and NPLN assessments) also demonstrated improvement for Aboriginal students in *QuickSmart* schools.

Most teachers and tutors reported improved numeracy outcomes for all Aboriginal students, as a result of their participation in *QuickSmart*. Other academic and social outcomes were also observed, including improved attendance, increased participation in class activities, as well as increased self-esteem, confidence and improved behaviour.

Teacher and tutor perspectives

Most staff agreed that the program was effective in meeting the needs of most or all of the targeted students. Teachers reported some difficulties with the withdrawal program; mostly in terms of the disruption to lessons and the difficulty some students face in rejoining class lessons.

The *QuickSmart* professional learning program was judged to be effective. However, only one or two schools trained all their teachers. Others schools gave priority to program coordinators and tutors or support staff who would work directly with students. Class teachers in these schools reported that they had, at least, become familiar with the *QuickSmart* strategies, and saw value in their use with all students.

Impacts on whole-school practices

The introduction of *QuickSmart* appears to have had minimal impact on overall school culture. Nevertheless, some key impacts identified by principals included:

- strengthening of relationships between the school and community
- improved attitudes to mathematics amongst students
- teachers reflecting on the potential benefit of using the *QuickSmart* strategies with students in class numeracy lessons.

Factors leading to success

A number of factors were identified as contributing to the program's overall success. These included:

- selecting and retaining the 'right' tutors
- building strong relationships: between the school and the tutors, between teachers and tutors; and between tutors and their students
- regular monitoring of student progress using school-based assessments, *QuickSmart* CAAS assessments and, to a lesser extent SMART data
- quality training, promoting teacher and tutor confidence in implementing *QuickSmart*
- establishing a *QuickSmart* coordinator role to provide dedicated program support to tutors, students, class teachers, and parents.

Sustainability

While *QuickSmart* is labour-intensive and complex to organise, its results are impressive. This, and the potential to expand practices beyond the student-withdrawal program, made it an attractive proposition for the NPLN schools to maintain beyond the period of funding.

Four factors are identified as being critical to the sustainability of *QuickSmart* in schools:

- securing a funding source for ongoing employment of tutors
- supporting the *QuickSmart* coordinator with relief time to complete the complex management tasks
- provision of additional resource kits
- ensuring a strategy for ongoing training for new teachers or tutors.

The main obstacle to continued implementation of *QuickSmart* was the substantial funding required to employ tutors. Three distinct possibilities emerged:

- obtaining additional funding from a new external source, or cancelling the program
- identification of a funding source within the existing school budget
- incorporation of the tutoring role into the workload of support teachers, or relying on volunteers.

All four principals in the schools visited confirmed that it's likely that they would 'find' alternative funds to maintain the individual student intervention.

Section Findings

Implementation key findings

- Ease of implementation, resources and assessment software were instrumental in schools' decisions to implement *QuickSmart* as their individual intervention.
- Decisions about which children may take part in *QuickSmart* need to consider a range of criteria in addition to NAPLAN or other assessment results.

QuickSmart Numeracy

NPLN Executive Summary and Key Findings

- The costs of training placed limits on the number of teachers and other staff who could take part in the *QuickSmart* professional learning program.
- The role of the coordinator was essential in establishing and managing the withdrawal program.
- The professional learning model was effective in increasing teacher and school capacity to implement *QuickSmart* strategies beyond the individual intervention.

Effects for students key findings

- Improvements in numeracy outcomes for students involved in the *QuickSmart* program are evident from data obtained from the teacher survey and school visits.
- Improvement in numeracy outcomes for students in schools implementing *QuickSmart* is evident in NAPLAN and NPLN results.
- Improvement in numeracy outcomes for Aboriginal students is at least comparable to, and in cases greater than for non-Aboriginal students.
- School staff and parents reported increased student confidence and improved self-esteem as a result of engagement with *QuickSmart*, resulting in improved numeracy and other academic and social outcomes.
- Students reported enjoyment of *QuickSmart* and identified numeracy improvements, through the online Cognitive Aptitude Assessment System (CAAS) assessment scores. They were proud of being better able to do things that are important to them.

Teacher and tutor key findings

- Overall, teachers and tutors understood the purpose and principals of *QuickSmart* and believe it to be a very effective intervention for the targeted students.
- Some teachers indicated that they had incorporated *QuickSmart* strategies into their general numeracy lessons.
- School executive indicated that a *QuickSmart* school coordinator was essential to the successful implementation of the program, especially to manage the data requirements from SiMERR.

Impact in schools key findings

- To date *QuickSmart* has had limited impact on the culture or practices of schools as a whole.
- The effectiveness of the *QuickSmart* program has led some schools to consider developing whole-class programs based on the strategies.
- Parent involvement had increased as a result of *QuickSmart*, with many parents indicating their desire for the program to continue.
- The employment of tutors is the critical factor in determining the sustainability of the program.

Reading to Learn

The *Reading to Learn* program is designed to enable students from all backgrounds to read texts in all areas of their school curriculum, with full comprehension. *Reading to Learn* promotes a cross-curricula and cross-year approach to learning to read and write, through engaging with fiction and non-fiction texts.

Scaffolding support is an important component of *Reading to Learn*. The concept of scaffolding in teaching literacy in Australia has been promoted by Brian Gray and Wendy Cowey (Rose, Gray, & Cowey, 1999). David Rose was a development partner in that early work, and the approach of both *Reading to Learn* and *Accelerated Literacy* grew out of that shared work. The programs are now conceptually distinct.

Fifteen public schools and three Catholic primary schools implemented the *Reading to Learn* program. Of these, seven schools participated in the qualitative field visit component of the evaluation. Survey responses were received from 115 staff from 16 schools.

Executive summary

Reading to Learn is presented as a comprehensive literacy program to be implemented on a whole-class basis. It is underpinned by an intensive professional learning program. It appears that some of the most beneficial aspects of *Reading to Learn* have arisen from the shared experience of participating in the training, and the renewed focus on literacy learning in each school. How this has flowed on to students has been of varied benefit.

Implementation of *Reading to Learn*

Principals highlighted the importance of being able to choose the program to be implemented within the school. In several instances the decision was made at regional level, causing a significant degree of resistance to the intervention in several schools. This, combined with dissatisfaction with the initial training, resulted in division amongst school staff, and a reduction in the cohesive implementation at a whole-school level.

For the remainder of schools, strong leadership, ongoing support for teachers and working with parents and the community contributed to successful implementation.

Outcomes for students

Comparison of the performance shown in external assessment data and the perceptions of many school stakeholders regarding the effectiveness of the *Reading to Learn* program reveals a significant mismatch. Disappointing early NAPLAN results contrast with the positive impressions of a large number of respondents regarding the benefits of elements of the program for many students.

Reading to Learn was not the sole literacy intervention implemented in each school. It is acknowledged that it is difficult to attribute student performance solely to the *Reading to Learn* program.

Most respondents indicated that *Reading to Learn* has increased student engagement with reading, improved reading and comprehension skills, and improved student writing.

It was reported widely that *Reading to Learn* had:

- improved students confidence in reading
- increased student capacity to use a variety of strategies to develop comprehension
- enabled student transfer of literacy skills and strategies into other key learning areas
- extended the diversity of texts that students were engaged in reading both in and out of school.

Reading to Learn

Some teachers with students with special needs in their classes reported that the program delivered lesser gains for these students. Other teachers with special needs students said that the capacity of *Reading to Learn* to support students in confidently attempting tasks was instrumental in improving their reading, particularly for the higher ability students in this group.

The repetitive nature of the program had a negative outcome for some of the more capable students who reported that they became bored once they had mastered the new concepts and meaning of the words in a detailed examination of a particular text. This view was supported by teachers and parents in their responses.

Outcomes for Aboriginal students

Almost half of the respondents who had Aboriginal students in their classes reported that *Reading to Learn* had improved reading and comprehension skills for most or all Aboriginal students in their class. Almost all of the other respondents with Aboriginal students in their class said that some Aboriginal students had improved. Very few said that no Aboriginal students had improved.

NAPLAN data may support a proposition that for the Aboriginal students only, reading improved slightly more in *Reading to Learn* schools, compared to the whole state improvement.

Outcomes for teachers

Many teachers reported that their literacy teaching practices had improved. They described having built confidence and expertise in purposeful choice of texts and teaching strategies, and in the development of well-structured literacy lessons. This was most beneficial to beginning teachers.

The most positive and significant aspects of the program for teacher practice included:

- more purposeful selection of teaching texts with richer content, which better supported teaching literacy across the curriculum
- explicit incorporation of detailed reading strategies to develop comprehension skills
- improved understanding of text types and scaffolding for writing
- increased participation in collegial discussion and joint preparation of literacy teaching content in stages.

Teachers felt that *Reading to Learn* was time-intensive in lesson preparation and delivery, and that in many instances it was necessary to modify the structure and elements of the program to work within the boundaries of available time and resources, student need and ability level, and the stage or class curriculum focus.

The majority of teachers were trained in workshops delivered by the program developer or regional trainers. Half of the respondents also participated in school-based professional development. A small number of teachers undertook further training to become trainers in *Reading to Learn* themselves.

In a minority of cases, negative perceptions of the program resulted from teachers' experiences with the training model and school implementation.

Impacts on whole-school practices

Staff reported widely that the principal value of the implementation of *Reading to Learn* was the commonality of language that led to collegial discussion and greater collaborative effort around literacy teaching. One principal's view is representative of the comments of many school staff:

“I think it has been beneficial for all our staff as a school; all the things we have been able to do and work together and the new opportunities that it has presented.”

Increased emphasis and teacher attention on literacy learning was universally noted.

School culture improved in many instances. A number of schools spoke positively about the culture of staff accepting new leadership responsibility for literacy improvement. Practices such as whole-school planning, team development and learning-focused dialogue were becoming embedded in school operation.

Factors influencing success

Three factors particularly influenced the success of the program:

- leadership of literacy improvement
- funding for the program
- whole-school implementation.

The most successful schools were those in which the principal and executive actively drove program implementation and supported staff to share responsibility for successful implementation, improvement in literacy learning and literacy teaching practices. Aligned to this was school literacy planning which defined the goals and actions for literacy development.

NPLN funding allowed teaching staff to attend program training. In many schools the program also allowed for the purchase of multiple sets of books, in sufficient numbers for every student to have their own copy. Importantly, it also enabled employment of a dedicated school *Reading to Learn* coordinator position, and provided time for collaborative planning and programming by staff.

Whole-school engagement with the program was identified as a critical factor influencing success. Where this occurred, the training of most teachers and implementation in most classrooms, brought the benefits of shared understanding of the philosophy, language and strategies of the program, as well as providing continuity for students.

Challenges experienced in implementing *Reading to Learn*

In several schools the program was implemented across the school from K-6. In a few schools teachers chose not to participate or continue with the program.

Small schools reported difficulties in using the program in composite classes including: the need to address a broad range of student needs arising from age and relative ability, the need to plan continuously over a two or three year cycle, and the demands of doing extra preparation.

While training was seen as essential to the implementation of *Reading to Learn*, many teachers expressed the view that the initial training model and delivery could be improved by addressing issues of flexibility in delivery, catering for diversity of student needs, and giving greater emphasis to practical application.

In some schools, the lack of ongoing professional support was seen as a barrier to effective implementation. Opportunities for more sharing of programming and lesson planning between teachers and between schools, were also suggested, particularly as a method of reducing the workload of individual teachers in lesson and resource preparation.

Sustainability

Generally schools supported the continuation of many positive elements of *Reading to Learn* but did not see that it would be the exclusive method of literacy teaching. Many teachers said that they would use parts of the program but would supplement it with other literacy strategies in order to cater for all students, and address all curriculum requirements.

The factors identified as being critical to the sustainability of *Reading to Learn* in schools beyond the funding period include:

- ongoing commitment and support from the school principal and leadership team
- support for ongoing collaboration, planning, unit development and lesson study
- ensuring a strategy for ongoing professional learning and training of new teachers, including indication of ongoing support for the program from DEC regions
- continued allocation of resources to purchase materials, including class sets of texts, stationery and other consumables.

Section Findings

Implementation key findings

- Strong leadership, ongoing support for teachers and working with parents and the community contributed to successful implementation.
- In several instances the choice of literacy intervention was made at regional level, causing a degree of resistance within schools.
- Inconsistencies in and varied quality of the initial training had a significant impact on the success of implementation of the program.
- In-school professional learning was effective in providing in-time, targeted support for teachers.

Effects for students key findings

- Engagement with *Reading to Learn* has improved student confidence in reading.
- Students have developed an increased capacity to use strategies to promote comprehension.
- *Reading to Learn* had improved reading and comprehension skills for most or all Aboriginal students involved in the program.
- Students have demonstrated transfer of literacy skills and strategies into other key learning areas.
- There has been an extension in the diversity of texts that students were engaged in reading, both in and out of school.

Teacher perspectives key findings

- *Reading to Learn* strategies were well received by teachers and have often been incorporated into their teaching repertoires, especially more explicit reading strategies to develop comprehension skills.
- Teachers report being more reflective in their practice, and more discriminating in the selection of texts and design of learning activities.
- There has been improved teacher understanding of text types and scaffolding for writing.
- Collegial planning and joint preparation of resources has relieved workload pressures and enhanced teacher confidence.

Impacts in schools key findings

- Whole-school engagement with the program was identified as a critical factor influencing success.
- Teachers demonstrate increased awareness of the benefits of working collegially.
- Practices such as whole-school planning, team development and learning-focused dialogue are becoming embedded in school operation.
- Ongoing commitment and support from the school principal and leadership team is seen as essential for sustainability of the program.

Evaluations undertaken by Urbis Pty Ltd

In November 2010, Urbis was contracted by the then NSW Department of Education and Training (now Department of Education and Communities NSW DEC) to conduct an evaluation of the following programs, as part of the National Partnership on Literacy and Numeracy:

- *Focus on Reading 3-6*
- *Mindful Learning, Mindful Teaching*
- *Making Up Lost Time In Literacy (MULTILIT)*
- *Taking Off With Numeracy (TOWN)*

Evaluation methodology

The evaluation methodology for each of the four program evaluations comprised the following components:

- knowledge review – a review of program documentation relating to each program
- scoping of data and data sets, to identify data analysis that would be achievable – including feedback from workshops and conferences
- development of a Project Plan, setting out the finalised methodology, risk management strategy and timeframe
- visits to a sample of schools that had used each program, to interview school Executive, Certified Trainers, teachers, parents and students
- online survey of staff in all schools that implemented each program
- stakeholder interviews (e.g. program personnel, Regional Facilitators)
- analysis of National Assessment Program – Literacy and Numeracy (NAPLAN) and NPLN assessment data.

The methodology for this evaluation was developed in close consultation with NSW DEC, in particular the Student Engagement and Program Evaluation Bureau.

The final project plan containing the methodology was submitted to NSW DEC in November 2010, and approved by the NPLN NSW Programs Program Evaluation Reference Group, which oversaw this evaluation.

Focus on Reading 3-6

Focus on Reading 3-6 aims to provide professional learning support to classroom teachers by targeting teachers of Years 3 – 6 in a school or community of schools. Its main goal is to increase teacher knowledge about how to develop fluent readers, and developing comprehension and vocabulary skills, based on effective evidence-based practice. The program involves explicit teaching of critical aspects of reading. Students' reading progress is monitored against the K-6 Literacy Continuum/English K-6 syllabus (DET, 2009a: 28).

The core aspects of *Focus on Reading 3-6* are engagement of model teachers in the research evidence about effective literacy teaching practice; intensive, purpose-driven learning; between-session tasks designed to translate new learning into classroom action over time; and ongoing, systematic reflection on classroom practices and student progress. Classroom teachers were released from class for up to 16 days' of program training and planning, assisted by a group of Certified Trainers.

Phase 1 of the program focused on teaching for *Comprehension*, Phase 2 *Vocabulary knowledge* and *Fluent text reading* practices, while Phase 3 focused on consolidating and embedding new teaching and learning practices into school and classroom structures.

A total of 36 schools participated in *Focus on Reading 3-6*. Survey responses were received from 178 staff across 32 schools.

IMPLEMENTATION OF FOCUS ON READING 3-6

The program was implemented over three school semesters: Semester 2, 2009; and Semesters 1 and 2, 2010. The most intensive periods of professional learning occurred in the first two semesters in which the program was operating. The *Focus on Reading 3–6* professional learning sessions were delivered by Certified Trainers, who could be regional or school based personnel. In turn, these trainers received formal training before they could be appointed as Certified Trainers.

Schools used the bulk of their National Partnership funding for Year 3-6 teachers to participate in training (including the cost of relief teaching) and to purchase recommended resources to implement *Focus on Reading 3–6*.

Executive summary

OVERALL EFFECTIVENESS OF FOCUS ON READING 3-6

The qualitative and quantitative research clearly demonstrates that *Focus on Reading 3-6* has delivered positive outcomes to teachers and schools, and benefits to students in the 36 schools participating in the program.

Certified Trainers expressed a high level of satisfaction with the quality, content and usefulness of the training they received under the program. Similarly, teachers and other school staff expressed a high level of satisfaction in relation to the content and quality of the training provided to them by the Certified Trainers, and the accompanying program resources. Most school staff reported receiving strong leadership for *Focus on Reading 3-6* in their school, as well as good support and guidance in how to implement the program. Support for *Focus on Reading 3-6* within the schools reportedly grew over time as its benefits became more apparent.

Where school leadership was not evident, as might be expected, the program was implemented with far less enthusiasm and consistency.

The specific outcomes *Focus on Reading 3-6* delivered to teachers, students and the school as a whole are detailed below.

OUTCOMES FOR TEACHERS

School staff reported that the main impact of *Focus on Reading 3-6* was the dramatic change in pedagogy and increased understanding of how to teach reading.

School staff consistently reported positive outcomes following from their participation in *Focus on Reading 3-6*. The great majority reported that the program had had a positive impact on their knowledge, attitudes and skills. Schools and teachers reported that *Focus on Reading 3-6* had had an impact (major or moderate extent) in the following areas:

- a deepened understanding of comprehension strategies and the links to comprehension, vocabulary knowledge and text reading
- a deepened understanding of effective teaching of reading
- increased belief in teachers' ability to improve literacy outcomes of all students
- increased belief in teachers' ability to improve the literacy outcomes of low achieving/disadvantaged students
- deepened understanding of the nature and needs of literacy learners in Years 3-6
- increased willingness to participate in shared reflection and discussion of teaching of reading with other staff
- increased ability to translate literacy theory into practice.

Key changes to teaching practice identified by teachers as a result of the program included: explicit teaching according to needs/ use of differentiation to target students; use of the 'super six' strategies; and use of more comprehension strategies. In addition, many teachers reported using the *Focus on Reading 3-6* strategies across all Key Learning Areas (KLAs) including English, Religious Education, Science, Human Society and the Environment, and Maths.

OUTCOMES FOR STUDENTS

In both data sets (NAPLAN and NPLN assessments), gains in mean reading scores were observed for all student cohorts at *Focus on Reading 3-6* schools. However, the extent of these gains varied compared to those observed for all NPLN literacy focus schools, and for all State schools (for NAPLAN data only). In both NAPLAN cohorts (students in Year 3 in 2008 and 2009), students at *Focus on Reading 3-6* schools achieved slightly higher reading score gains than for students across the State as a whole. In all cohorts, the reading growth observed for students at *Focus on Reading 3-6* schools was generally in line with the gains achieved across all NPLN literacy focus schools. A range of limitations on the reliability and validity of results observed in these data sets have been outlined in this report; these should be considered when drawing conclusions from the results discussed.

Teaching staff, Executive staff and Certified Trainers were all extremely positive about the impact of *Focus on Reading 3-6* on student outcomes, with the great majority rating the program as effective in this regard. They reported various improvements in areas relating to students' engagement with and capability in literacy. More than four out of five school staff surveyed reported observed improvements in:

- the volume, variety and complexity of texts read by students
- students' ability to read for meaning
- students' confidence in, and enthusiasm for, reading
- their understanding of what is expected of them when they read
- students' willingness to discuss what they have read
- students' use of effective strategies to assist them read and understand text.

In discussions students and, in some cases parents too, were able to articulate such improvements.

OUTCOMES FOR ABORIGINAL STUDENTS

School staff and Aboriginal parents and students responded positively to the program. However, there was no evidence of any notable differences in Aboriginal students' experiences and outcomes in comparison with non-Aboriginal students.

Almost all those teachers and staff who were able to comment said that *Focus on Reading 3-6* was as effective for non-Aboriginal students as for their non-Aboriginal counterparts. The main reason for this was that the program is seen to cater to the needs of all students.

NAPLAN data indicates that gain scores for Aboriginal students involved in *Focus on Reading 3-6* were higher than those for non-Aboriginal students in both cohorts. NAPLAN data also indicates that the gain scores for Aboriginal students were marginally higher than those for non-Aboriginal students across all three cohorts. Although these signs are positive, the small sample size (less than 90 Aboriginal students) needs to be taken into account when considering these results.

IMPACT ON SCHOOL

Focus on Reading 3-6 is regarded by the great majority of staff to have had a positive impact on their school. The key impacts identified were greater clarity about their school's goals and expectations re reading outcomes; greater transparency and consistency in the way literacy is taught in the school; more explicit and focussed teaching of reading; and that most teachers in the school are now using the teaching strategies in their everyday teaching across the KLAs. A high proportion of surveyed respondents (92%) indicated they would recommend the use of *Focus on Reading 3-6* in other schools.

Some schools and staff were also very positive about taking a whole of school approach, and involving K-2 teachers and teaching support staff in the program. This has resulted in standard reading teaching practices across the entire school.

CRITICAL SUCCESS FACTORS

A range of success factors were identified as contributing to the program's impact. These included:

- strong school leadership
- the availability of funding to allow adequate staff release from classroom to attend training
- taking sufficient time to implement the program to enable staff to absorb and apply new learnings
- staff being open to new teaching approaches
- the quality and consistency of support provided by Certified Trainer and Program Facilitators
- the volume, quality and targeted nature of the professional development based on evidence-based practice
- the shift within the program towards students discussing and questioning text
- the regular monitoring of student progress
- the applicability of the program to students of all abilities
- the ability to purchase new reading texts and resources.

STRENGTHENING THE IMPACT OF FOCUS ON READING 3-6

Participation in *Focus on Reading 3-6* required classroom teachers to spend up to 16 days in training and program-related planning and activities. Although relief teachers were funded to replace these teachers, some schools were of the view that these absences were at times unsettling for students, and several reported receiving complaints from parents about this. In future, consideration could be given to implementing strategies that would minimise disruption to classes.

The *Focus on Reading 3-6* program training modules were deemed too long and 'bulky' by some teachers. It was frequently suggested that the modules could be condensed or streamlined.

Focus on Reading 3-6

There was a strong view amongst school staff that having an internal school-based Certified Trainer was more effective than an external trainer.

Focus on Reading 3-6, as its name implies, focuses on Years 3-6. However, many schools commented that they would like to see the program extended to K-6. Indeed some schools had trained all their teachers in the program (not only those teaching Years 3-6) and saw this as highly desirable and beneficial.

Few parents were aware that their child's school was participating in *Focus on Reading 3-6*. Most reported there had been little or no communication from the school about the program or the reading strategies and activities their child would be using (although it is clear some schools had done this). A number of parents commented that they would like to have been more informed about the program, and that they may have been able to play a role in supporting their child's reading at home. The one or two schools that did communicate well with parents about the program saw this as advantageous.

School Executive staff, teachers and Certified Trainers made a number of specific suggestions relating to the strengthening of *Focus on Reading 3-6*, principally relating to:

- practical classroom programming, observation and support
- program design and delivery
- program training content
- future program funding and sustainable and ongoing delivery.

SUSTAINABILITY

Three critical factors were identified as being critical to the sustainability of *Focus on Reading 3-6* beyond the funding period were:

- ongoing commitment and support from the school leadership team
- embedding the program in literacy teaching at the school
- devising a training strategy for new staff.

Schools and school staff were relatively confident many of the gains from *Focus on Reading 3-6* could be sustained beyond the funding period, and a number of schools were able to articulate plans for doing this. The primary challenge of maintaining the program concerns training and supporting new teachers as they join the school.

Section Findings

Outcomes for teachers key findings

- *Focus on Reading* has impacted on teaching and other school staff in various ways. School staff reported that the main impact had been a dramatic change in pedagogy and increased understanding of how to teach reading.
- The vast majority of teachers and staff reported that *Focus on Reading 3-6* has had a positive impact (to a major or moderate extent) on their knowledge, attitudes and/or skills in teaching reading. The greatest impact was evident in relation to a deepened understanding of comprehension strategies and the links to comprehension; vocabulary knowledge and text reading with about two-thirds (64%) of respondents surveyed reporting this had impacted on them to a *major extent*.
- The key changes to teaching practice identified that have occurred since implementing *Focus on Reading 3-6*, were: explicit teaching according to needs/ use of differentiation to target students; use of the 'super six' strategies; use of more comprehension strategies.

Focus on Reading 3-6

- These impacts were commonly attributed to the *Focus on Reading 3-6* Certified Trainer/Program Facilitator; funding to allow adequate staff release; and the provision of intensive professional development. Other key ingredients for success included strong school leadership; classroom modelling of strategies; adequate time for implementation; and staff being open to new ways of teaching Year 3-6 students to read.

Outcomes for students key findings

- In both data sets (NAPLAN and NPLN assessments), gains in mean reading scores were observed for all student cohorts at *Focus on Reading 3-6* schools. However, the extent of these gains varied compared to those observed for all NPLN literacy focus schools, and for all State schools (for NAPLAN data only). In both NAPLAN cohorts (students in Year 3 in 2008 and 2009), students at *Focus on Reading 3-6* schools achieved slightly higher reading score gains than for students across the State as a whole. In all cohorts, the reading growth observed for students at *Focus on Reading 3-6* schools was generally in line with the gains achieved across all NPLN literacy focus schools.
- Schools and teachers were very positive about the effectiveness of *Focus on Reading 3-6* in improving literacy outcomes for students. A high proportion of Certified Trainers (100%), Executive Staff (94%) and Stage One Teachers (92%) rated the program as effective. Specialist and Support staff were slightly less likely to report that it was very effective or effective (77%). Teachers in the earlier stages of their career (less than five years experience) were more likely than more experienced teachers to report finding the program effective.
- Schools and teachers reported observed improvements in areas relating to students' engagement with and capability in literacy, in particular students' willingness to discuss what they have read and their effective use of strategies to assist them understand and read text.
- In many schools, the strategies implemented under *Focus on Reading 3-6* are being used across all Key Learning Areas, including English, Religious Education, Science, HSIE and Maths.
- Several key success factors for student outcomes were identified including: the variety of different strategies/activities; introducing fun and enjoyment into reading; increased verbal communication and discussion in the classroom; more listening and questioning about texts; and the monitoring of student progress.
- In some, but not all cases, parents identified improvements in their child's reading enthusiasm and/or ability. Many students interviewed were able to describe changes in their reading habits and abilities.
- Aboriginal parents and students responded positively to the program. However there was no evidence of any notable difference in Aboriginal students' program experience and impact in comparison with that of non-Aboriginal students.
- Most of the teachers who were able to comment were of the view that *Focus on Reading 3-6* is as effective with Aboriginal as with non-Aboriginal students. The main reason for this was that the program's strategies are seen to cater to the needs of all students.
- NAPLAN data indicates that gain scores for Aboriginal students involved in *Focus on Reading 3-6* were higher than those for non-Aboriginal students in both cohorts. NAPLAN data also revealed that gain scores for Aboriginal students were marginally higher than those for non-Aboriginal students across all three cohorts. Although these signs are positive, the small sample size (less than 90 Aboriginal students) needs to be taken into account when considering these results.

Impact on schools key findings

- Most school staff report *Focus on Reading 3-6* has had positive impacts at a school level. The great majority report there had been more clarity about their school's goals and expectations re reading outcomes (93%); greater transparency and consistency in the way literacy is taught in their school

Focus on Reading 3-6

(92%); teaching of reading is now more explicit and focussed (90%); and that most teachers in their school are using the teaching strategies in their everyday teaching across the KLAs (89%).

- Most staff reported receiving strong leadership for *Focus on Reading 3-6* in their school (90%) receiving good support and guidance on how to implement *Focus on Reading 3-6* (86%) and believe that support for *Focus on Reading 3-6* program at their school has grown over time (82%). A very high proportion of teachers and school staff would recommend the use of *Focus on Reading 3-6* in other schools.
- The factors leading to successful school impacts and outcomes include: strong and supportive school leadership; a good-working environment with open dialogue and constructive feedback; inclusion of all staff in training; the program's capacity to cater for students of all abilities; and the purchase of new resources.
- There are mixed views about the sustainability of *Focus on Reading 3-6* in the longer term. Although some schools and school staff are relatively optimistic about the program's sustainability and have already embedded, or started to embed, the program into school structures and processes, there is an identified need for continual training and support. There are particular concerns about the training of new staff.

Making Up Lost Time in Literacy (MULTILIT)

Making Up Lost Time in Literacy Reading Tutor Program (henceforth referred to as *MULTILIT*) was developed by researchers at the Macquarie University Special Education Centre (MUSEC). The program targets low-progress readers from Year 2 and above through one-to-one tuition. It comprises three components:

- *MULTILIT* Word Attack Skills, which teaches the phonics skills needed for decoding, using a synthetic phonics approach.
- *MULTILIT* Sight Words, which teaches the 200 most frequently encountered words in children's books.
- *MULTILIT* Reinforced Reading, which is supported book reading based on an updated version of the 'Pause, Prompt and Praise' model. The aim of this component is to promote regular reading for learners for 20 minutes each day.

Additional resources are provided on the *MULTILIT* website and extension materials are available for purchase. Professional training is also made available by MUSEC.

Survey responses were received from 177 staff members across 55 schools.

IMPLEMENTATION OF *MULTILIT*

Most schools used *MULTILIT* for the first time under the NPLN. Two-thirds of schools implemented the program in all seven terms of the funding period. Years 3 and 4 were the most frequently targeted years. The majority of schools targeted students whose literacy levels fell well below NAPLAN benchmarks and students with low literacy levels assessed in another way (other than NAPLAN).

In many cases, the frequency of *MULTILIT* was not implemented in accordance with the programs recommendations. Only 55% of schools implemented the program the recommended minimum of four sessions per student per week. Only 16% did the full 40-minute sessions as recommended and close to a quarter of schools delivered sessions of 20 minutes or less.

The three components of the program were not implemented equally. *MULTILIT* Word Attack was the most consistently implemented element, followed by *MULTILIT* Sight Words. In around 10% of schools, *MULTILIT* Reinforced Reading was rarely or never used.

The most important sources of support for the program were the written *MULTILIT* books, support from the school Executive and in-school support from the *MULTILIT* Coordinator.

Around three-quarters of *MULTILIT* Coordinators and just over half of *MULTILIT* Tutors undertook a formal training course. Most of the others undertook internal training within their schools.

Executive summary

OVERALL EFFECTIVENESS OF *MULTILIT*

Schools implementing *MULTILIT* achieved gains in NAPLAN and NPLN Assessments that were equivalent to all NPLN literacy-focused schools. While these data do not indicate significant gains in literacy at the State level, our analysis concludes that gains in literacy are being made at a local level.

Numerous examples were provided by school staff of students whose test scores and reading levels had improved, many of them significantly. Anecdotal evidence was also provided by students who were involved in the program, parents/carers and staff to demonstrate the gains in reading. Nevertheless, participation in *MULTILIT* clearly resulted in greater and faster gains for some students, and slower or minimal gains for others. The evaluation found that relative gains in reading may be significantly impacted by the degree to which the program was implemented as intended.

The program methodology is highly prescriptive in its approach and sets minimum session duration and frequency requirements. The research found that most schools did not implement the program strictly as recommended.

However gains in reading were only one part of the equation. It was also clear that for many children, participation in the program and the improvements they made had led to increased levels of confidence, greater enjoyment in reading, improved attitudes to school and schoolwork, and a broadening of their world.

The specific benefits *MULTILIT* delivered to students, staff and schools are summarised below.

OUTCOMES FOR STUDENTS

In both the NAPLAN and NPLN Assessment data sets, gains in mean reading scores were observed for all student cohorts at *MULTILIT* schools. However, the extent of these gains varied compared to those observed for all NPLN literacy-focus schools, and for all State schools (for NAPLAN data only). In both NAPLAN cohorts (students in Year 3 in 2008 and 2009), students at *MULTILIT* schools achieved slightly higher reading score gains than for students across the State as a whole. In all cohorts, the reading growth observed for students at *MULTILIT* schools was generally in line with the gains achieved across all NPLN literacy focus schools. A range of limitations on the reliability and validity of results observed in these data sets have been outlined in this report; these should be considered when drawing conclusions from the results discussed.

The majority of survey respondents and staff consulted in the qualitative research believed that *MULTILIT* had overall been an effective program for improving literacy.

The main areas in which improvements were seen were in the decoding of texts and confidence in reading. Improvements were also observed in fluency, comprehension, reading levels and attitudes towards school.

Numerous examples of improved reading levels and/or NPLN Assessment scores were provided by schools that were visited in the qualitative stage. Examples were also provided of instances in which *MULTILIT* had been less effective: these generally involved a learning difficulty on the part of the student.

The program had reportedly been effective not only in improving reading levels, but in boosting students' confidence in themselves, which in several instances had led to achievement or improvement in other areas.

OUTCOMES FOR ABORIGINAL STUDENTS

The majority of staff believed that *MULTILIT* was as effective when used with Aboriginal students as with non-Aboriginal students. Some believed the program was particularly well suited to Aboriginal students because of the one-on-one nature of the methodology. Confirmation of the program's efficacy was provided by a number of parents/carers of Aboriginal children who observed improvements in their children's reading.

Overall, the reading gains in NAPLAN and NPLN Assessments for Aboriginal students were in line with those for non-Aboriginal students.

OUTCOMES FOR STAFF AND SCHOOLS

MULTILIT has generally enjoyed a high level of support within the participating schools. At some schools the staff are very enthusiastic and supportive, while at others there is more muted support.

Lack of support amongst staff at some schools was thought to relate to the disruptions that *MULTILIT* causes to regular classes when children are withdrawn. Some schools have put in place strategies for limiting the disruptions to classes.

MULTILIT has impacted on a number of teachers' and tutors' levels of knowledge, awareness, confidence and skills though improved use of data is student monitoring and planning, reminding staff of the difficulties some children experience in learning to read effectively, and improved confidence in teaching.

CRITICAL SUCCESS FACTORS

Critical success factors identified were:

- the intensive one-on-one nature of the program
- the clear and prescriptive approach
- effective engagement of students
- seeing the program in the context of a whole-of-school strategy
- the role of the *MULTILIT* Coordinator
- School Executive support.

The main factors that may limit success of the program was seen to be the suitability of the program to some students e.g. students with a learning disability, older 'too cool' students, and failure to implement the program as intended, which may result in slower gains.

STRENGTHENING THE IMPACT OF *MULTILIT*

The main areas for strengthening the program's impact were:

- Expansion of the program through increased and ongoing funding, to allow more children to participate, more tutors to be employed and purchase more resources.
- Improved links to classroom literacy program, so that what occurs in the classroom is consistent with what is occurring in individualised interventions. Better understanding of the approaches used in *MULTILIT* amongst classroom teacher would assist in improving the linkage.
- Difficulty with certain aspects of the program were experienced by teachers/tutors, suggesting either modification of better explanation is warranted. These included the use of the 'nonsense words' in *MULTILIT* Word Attack; identifying/finding suitable reading material for older learners in the Reinforced Reading component; and additional activities/work sheets for each level.
- Consider incorporating broader literacy components e.g. spelling, comprehension and writing activities.
- Provision of more information/guidance on approaches for students with learning difficulties.
- Improved timetabling to limit the impact of student withdrawal - concerns around withdrawing children for too long and interrupting classes were one reason that a number of schools truncated the sessions.
- Strengthening the training requirement. While a fairly high proportion of *MULTILIT* Coordinators undertook *MULTILIT* training, only about half of *MULTILIT* Tutors undertook the formal training.

Those who did not undertake formal training were significantly more likely to report that the training they undertook did not prepare them sufficiently for implementing the program. Ongoing and refresher training was also an issue.

SUSTAINABILITY

A significant level of doubt was expressed regarding the likelihood that *MULTILIT* would be sustained in the same way as under the NPLN in many of the schools consulted. The most significant threat to

sustainability was seen to be lack of ongoing funding to resource the program, in terms of staff and physical resources.

The main success factors for sustainability of the program were the willingness and capacity of the school to support a staff-intensive program, capacity to purchase the materials required, and developing training strategies for new *MULTILIT* Tutors.

Section Findings

Implementation key findings

- Most schools used *MULTILIT* for the first time under the NPLN.
- Two-thirds of schools implemented the program in all seven terms of the funding period.
- Years 3 and 4 were the most frequently targeted years.
- The majority of schools targeted students whose literacy levels fell well below NAPLAN benchmarks and students with low literacy levels assessed in another way (other than NAPLAN).
- Just over half of schools implemented the program the recommended minimum of four sessions per student per week. However, only 16% did the full 40-minute sessions as recommended and close to a quarter of schools delivered sessions of 20 minutes or less.
- The three components of the program were not implemented equally. *MULTILIT* Word Attack was the most consistently implemented element, followed by *MULTILIT* Sight Words. In around 10% of schools, *MULTILIT* Reinforced Reading was *rarely* or *never* used.
- The most important sources of support for the program were the written *MULTILIT* books, support from the school Executive and in-school support from the *MULTILIT* Coordinator.
- Around three-quarters of *MULTILIT* Coordinators and just over half of *MULTILIT* Tutors undertook a formal training course. Most of the others undertook internal training within their schools.

Outcomes for students key findings

- In both the NAPLAN and NPLN Assessment data sets, gains in mean reading scores were observed for all student cohorts at *MULTILIT* schools. However, the extent of these gains varied compared to those observed for all NPLN literacy-focus schools, and for all State schools (for NAPLAN data only).
- In both NAPLAN cohorts (students in Year 3 in 2008 and 2009), students at *MULTILIT* schools achieved slightly higher reading score gains than for students across the State as a whole. In all cohorts, the reading growth observed for students at *MULTILIT* schools was generally in line with the gains achieved across all NPLN literacy focus schools.
- The majority of survey respondents and staff consulted in the qualitative research believed that *MULTILIT* had overall been an effective program for improving literacy. The main areas in which improvements were seen were in the decoding of texts and confidence in reading. Improvements were also observed in fluency, comprehension, reading levels and attitudes towards school.
- Numerous examples of improved reading levels and/or NPLN Assessment scores were provided by schools that were visited in the qualitative stage. Examples were also provided of instances in which *MULTILIT* had been less effective: these generally involved a learning difficulty on the part of the student.
- The program had reportedly been effective not only in improving reading levels, but in boosting students confidence in themselves, which in several instances had led to achievement or improvement in other areas.
- The majority of staff believed that *MULTILIT* was as effective when used with Aboriginal students as with non-Aboriginal students. Some believed the program was particularly well suited to Aboriginal

students because of the one-on-one nature of the methodology. Confirmation of the program's efficacy was provided by a number of parents/carers of Aboriginal children who observed improvements in their children's reading.

- Overall, the reading gains in NAPLAN and NPLN Assessments for Aboriginal students were in line with those for non-Aboriginal students.
- Critical success factors identified were
 - the intensive one-on-one nature of the program
 - the clear and prescriptive approach effective engagement of students
 - seeing the program in the context of a whole-of-school strategy
 - the role of the *MULTILIT* Coordinator
 - school executive support
- The main factors that may limit success of the program was seen to be the suitability of the program to some students e.g. students with a learning disability, older 'too cool' students, and failure to implement the program as intended, which may result in slower gains.

Impact on staff and schools key findings

- *MULTILIT* has generally enjoyed a high level of support within the participating schools. At some schools the staff are very enthusiastic and supportive, while at others there is more muted support.
- Lack of support amongst staff at some schools was thought to relate to the disruptions that *MULTILIT* causes to regular classes when children are withdrawn. Some schools have put in place strategies for limiting the disruptions to classes.
- *MULTILIT* has impacted on a number of teacher's and tutor's levels of knowledge, awareness, confidence and skills though improved use of data is student monitoring and planning, reminding staff of the difficulties some children experience in learning to read effectively, and improved confidence in teaching.
- A significant level of doubt was expressed regarding the likelihood that *MULTILIT* would be sustained in the school. The most significant threat to sustainability was seen to be funding.
- The main success factors for sustainability of the program were capacity of the school to support a staff intensive program, capacity to purchase the materials required, and developing training strategies for new *MULTILIT* Tutors.

Strengthening the impact of *MULTILIT*

The main areas identified for strengthening *MULTILIT*'s impact were:

- Expansion of the program
- Improved links to classroom literacy program
- Modifications to the *MULTILIT* program/books/materials
- Incorporate broader literacy components
- Provision of more information/guidance on approaches for students with learning difficulties
- Improved timetabling to limit the impact of withdrawals
- Strengthening the training requirement.

Mindful Learning, Mindful Teaching (MLMT)

MLMT is designed to build teacher capacity to improve the reading comprehension skills of students. It can better be described as a new approach to, or a new focus on, reading comprehension, rather than as a new 'program' in the formal sense.

MLMT is centred on an inquiry cycle which allows for a personalised approach for each learning community. This inquiry cycle involves identifying:

- What are the students' needs?
- What are the teachers' needs?
- How can we change teaching practices to better respond to student needs?

MLMT was developed by the Catholic Education Office (Parramatta diocese) (CEO). Under the NPLN, it has been implemented in eight schools in the Parramatta diocese in Stages 2 and 3, although some schools are using elements of *MLMT* in Stage 1. Implementation commenced in Term 4, 2009 and funding for *MLMT* was acquitted by December 2011.

Survey responses were received from 76 staff across seven schools.

IMPLEMENTATION OF *MLMT*

Although implementation of *MLMT* varied across the schools, depending on the needs of the school community, common elements included:

- professional learning for teachers
- use of data to inform teaching
- explicit teaching of reading comprehension strategies
- more effective use of strategies to teach reading comprehension
- purchase of new and more engaging texts
- Individualised Learning Plans (ILPs) for students experiencing difficulty with reading and Aboriginal students.

Professional learning for teachers under *MLMT* was targeted, comprehensive and ongoing. The bulk of professional learning was provided *in situ* by school leadership teams and TEs (CEO staff that visited *MLMT* schools 1-2 days each week), and included teacher observation, which was followed by a process of feedback and reflection.

Executive summary

OVERALL EFFECTIVENESS OF *MLMT*

The qualitative and quantitative research demonstrates that *MLMT* has had a positive impact on schools, and delivered benefits to teachers, students and the school as a whole. There was a common view among school staff that because *MLMT* was not a program *per se* and was not prescriptive, schools were able to adapt *MLMT* to meet the reading comprehension needs of the school community.

Critical to the success of *MLMT* was the way it was implemented in schools. School staff expressed considerable satisfaction with the school leadership teams, that led the way in identifying the needs of teachers and students, and developing targeted strategies to effectively respond to these needs.

Overall, schools were also satisfied with the support provided by the CEO and TEs. There was some dissatisfaction in schools with the communication about *MLMT* in the roll-out phase, which led to some early implementation challenges. However, these issues were resolved over time and did not impact significantly on the overall effectiveness of *MLMT*.

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The specific benefits *MLMT* delivered to teachers, students and the school as a whole are explained in more detail below.

OUTCOMES FOR TEACHERS

The majority of teachers surveyed and interviewed were of the view that *MLMT* had a positive impact on their literacy teaching practice, and made them better teachers. Specifically, teachers said *MLMT* had a positive impact on their knowledge, attitudes and skills, as well as on their classroom teaching practice.

Teachers said the professional learning gave them a better understanding of comprehension strategies, and how to effectively teach reading comprehension in the classroom. It also gave them greater confidence, and the belief that they did have the capacity to improve the reading comprehension of their students. This knowledge and confidence translated into significant changes in classroom teaching practice. As a result of *MLMT*, teachers were now:

- analysing data to identify the reading comprehension needs of students, and developing strategies to respond to these needs in the classroom setting
- explicitly teaching reading comprehension strategies
- questioning students in a way that required them to demonstrate a deep understanding of texts
- using existing evidence-based strategies for teaching reading more effectively (e.g. Readers' Circle, Readers' Theatre, Reciprocal Teaching)
- strategically selecting texts that were likely to engage and interest students
- participating in teacher observation, and a continual cycle of feedback and reflection
- monitoring selected students through ILPs.

OUTCOMES FOR STUDENTS

This evaluation analysed the effectiveness of *MLMT* for students by looking at three data sources: NAPLAN and NPLN assessment data supplied by NSW DEC, an online survey of school staff; and qualitative data collected during our school visits. All of this data provides an indication that the reading comprehension skills of students in *MLMT* schools has improved, as has students' confidence in and enthusiasm for reading.

In both data sets (NAPLAN and NPLN assessments), gains in mean reading scores were observed for all student cohorts at *MLMT* schools. However, the extent of these gains varied compared to those observed for all NPLN literacy-focus schools, and for all State schools (for NAPLAN data only). Despite these variations, the mean reading scores for *MLMT* students both before and after the NPLN period were higher than those for NPLN literacy-focus schools as a whole.

Note that the limitations relating to NAPLAN and NPLN assessment data outlined in Section 5.1 of this document must be taken into account when considering these results.

The online survey data and qualitative data collected during the school visits also indicates that the reading comprehension of students in *MLMT* schools has improved. School staff reported *MLMT* had given students:

- greater enthusiasm for and confidence in reading
- a better understanding of reading comprehension strategies and how to use these strategies to read for meaning
- a better understanding of what is expected of them when they read (i.e. an understanding that they need to comprehend and not just read words on a page)
- greater willingness to discuss what they have read, and express an opinion on texts
- more diverse texts to choose from.

OUTCOMES FOR ABORIGINAL STUDENTS

This evaluation required an assessment of the extent to which *MLMT* has improved the educational outcomes of Aboriginal students. However, only around six students in all *MLMT* schools identified as Aboriginal. Given this is such a small sample, it is not possible for us to draw any conclusions from this evaluation of the impact of *MLMT* on the educational outcomes of Aboriginal students. The qualitative and quantitative data we do have suggests that *MLMT* is as effective for Aboriginal students as for non-Aboriginal students.

While *MLMT* schools have a low percentage of Aboriginal students, they have a very high percentage of students with English as a Second Language (ESL) or a Language Background other than English (LBOTE), including one school with 80-85% ESL/LBOTE students. School staff generally said *MLMT* was as effective for ESL/LBOTE students as it was for non-ESL/LBOTE students. *MLMT* did, however, make teachers more *mindful* about potential gaps in the knowledge and vocabulary of ESL/LBOTE students which might impact on their reading comprehension.

IMPACT ON SCHOOLS

The majority of teachers agreed that since the introduction *MLMT* there was more clarity about their school's goals and expectations on reading outcomes. They also agreed that *MLMT* had resulted in greater transparency and consistency in the way literacy was taught in the school.

Although the NPLN was focused on Years 3-6, *MLMT* schools were implementing components of *MLMT* in Stage 1. A common theme was that schools now had a whole-of-school approach to, and focus on, reading comprehension. Teachers were using the same language, the same data to assess the needs of students, and the same assessment tools, all of which contributed to a collaborative whole-of-school approach to reading comprehension.

MLMT was said to have made the school environment more collegiate and supportive. There was a real sense in *MLMT* schools that a strong focus on reading comprehension, and the supports that came with that, had motivated teachers to work to a common goal and achieve real outcomes in the reading comprehension levels of students.

CRITICAL SUCCESS FACTORS

As noted above, critical to the success of *MLMT* was the fact that it was not prescriptive, and was flexible enough to enable schools to adapt it to meet the needs of the school community. Other key success factors included:

- a strong leadership team and a knowledgeable and supportive TE
- funding to allow for professional learning and the purchase of new and varied texts and electronic resources
- a strong 'whole-of-school' focus on reading comprehension
- willingness by teachers to adopt a new approach to teaching reading comprehension and to be more purposeful and reflective in their teaching
- training *in situ* that was targeted and relevant to the school environment
- collegiality and support among school staff which facilitated classroom observation and feedback, and the sharing of ideas
- using data to ensure classroom teaching strategies met the needs of all students in the classroom
- making reading fun for children by being *mindful* about the texts and activities likely to engage them.

STRENGTHENING THE IMPACT OF *MLMT*

Although, schools were generally very satisfied with *MLMT* as a reading comprehension tool, the main suggestions for strengthening *MLMT* related to:

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NPLN Executive Summary and Key Findings

- *Focus on Years 3-6*: many schools said *MLMT* was very effective for students in Years 3-6, and would be more effective if it was formally expanded to include Kindergarten –Year 6.
- *Networking opportunities for MLMT teachers*: several schools said *MLMT* could be improved by having a formal channel for *MLMT* lead teachers to communicate. Such a channel exists for principals but does not exist for lead teachers, who are generally responsible for the day-to-day management of *MLMT* in schools.

SUSTAINABILITY

Overall, schools are optimistic about the sustainability of *MLMT* after the cessation of NPLN funding. During school visits, school staff regularly said *MLMT* had brought about a cultural shift and a different way of thinking about reading comprehension which would not disappear when the funding ceased.

However, sustaining *MLMT* at the level it is currently at without funding will be a challenge for schools. For example, it will be much more difficult for schools to employ casual staff to release teachers for teacher observation, and for schools to purchase new and engaging texts for students. A strong commitment by the leadership team to reading comprehension, and professional learning for new and continuing staff, will be critical for the sustainability of *MLMT* in schools.

Section Findings

Implementation key findings

- Overall, schools were very satisfied with the implementation of *MLMT* in their schools, noting that because *MLMT* was not prescriptive, they were able to adapt *MLMT* to meet the needs of teachers and students in their school community.
- A leadership team was established in each school to oversee the implementation of *MLMT*, with assistance from the CEO and TEs. School staff were very supportive of the leadership teams within their schools. Overall, schools were also satisfied with the support provided by the CEO and TEs. There was some dissatisfaction in schools with the communication about *MLMT* in the roll-out phase, which led to some early implementation challenges. However, these issues were resolved over time
- Although implementation of *MLMT* varied across schools, common elements included: professional learning for teachers; use of data to inform teaching; explicit teaching of reading comprehension; use of improved strategies to teach reading comprehension; and the purchase of new and engaging texts.
- Professional learning for teachers was targeted, comprehensive and ongoing. Staff said teacher observation and feedback was a particularly valuable professional learning tool, despite initial resistance by some teachers to being observed and critiqued.
- The CEO played an active role in developing a strong and supportive network among *MLMT* principals. It was suggested that a similar network would have been useful for *MLMT* Lead Teachers as they often had responsibility for the day-to-day management of *MLMT* in schools.
- Individualised Learning Plans made teachers more aware of the needs of students who were struggling, and their needs were generally addressed in the classroom setting

Outcomes for teachers key findings

- The majority of teachers agreed that *MLMT* had had a positive impact on their literacy teaching practice and had made them better teachers. In the online survey, just over half (55%) of respondents indicated *MLMT* had had a *significant positive impact* on the way they teach literacy, and 44% identified that *MLMT* had had *some positive impact*.

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- The majority of teachers reported that *MLMT* had had a positive impact on their *knowledge, attitudes and/or skills*. *MLMT* deepened teachers' understanding of comprehension strategies and effective teaching of reading comprehension; increased teacher willingness to participate in shared reflection and discussion of their teaching practices; and increased their belief in their ability to improve literacy outcomes for students. A recurring theme throughout school visits was that *MLMT* had given teachers greater confidence, greater purpose, and made them more enthusiastic about teaching reading comprehension.
- The majority of teachers who taught literacy in the classroom on a regular basis also reported that *MLMT* had had a positive impact on their *classroom teaching practice*. In particular, *MLMT* enhanced teachers' ability to reflect on and critique their teaching of reading; improved their ability to question students in a way that demonstrated deep understanding of texts; and improved their ability to teach reading comprehension. Many teachers also reported that *MLMT* increased their skills in using existing evidence-based techniques such as Guided Reading, Reader's Circle and Reciprocal Teaching.
- Most teachers agreed they had made significant changes to the way they teach reading since the introduction of *MLMT*, and were now more *mindful* of what they were teaching and whether it met the needs of students.
- Key factors that contributed to positive teacher outcomes included: a strong leadership team and a collegiate school environment; targeted and ongoing professional learning; an enthusiastic and skilled TE; and school staff that were open to changing their teaching practices.

Outcomes for students key findings

- The NAPLAN and NPLN assessment data indicate gains in mean reading scores for all student cohorts at *MLMT* schools. However, the extent of these gains varied compared to those observed for all NPLN literacy focus schools, and for all State schools (for NAPLAN data only).
- Despite the abovementioned variations, the mean reading scores for *MLMT* students both before and after the NPLN period were higher than those for NPLN literacy-focus schools as a whole.
- In the online survey, 90% of school staff reported that *MLMT* had been *effective* (53%) or *very effective* (37%) in improving the literacy outcomes for students. School staff reported improvements in students': enthusiasm for and confidence in reading; understanding of what is expected of them when they read; use of effective strategies to assist them understand and read text; ability to read for meaning; and willingness to discuss what they have read. Improvements were also reported in the volume and variety of texts read.
- The outcomes for students reported in the online survey were consistent with the outcomes identified by school staff during school visits.
- Most parents interviewed did not have a good understanding of *MLMT*, but several provided examples of their children using comprehension strategies at home to demonstrate a deeper understanding of texts (e.g. drawing a picture after reading a text to explain it). Some parents also said there had been a notable change in their children's enthusiasm for, and confidence in, reading.
- Many of the students interviewed said they liked reading and looked forward to literacy block each day. Some students attributed this to the fact that they understood more now, and had access to interesting new texts. Students were able to articulate the various comprehension strategies they had been learning in class.
- School staff generally said that *MLMT* was as effective for Aboriginal students as for non-Aboriginal students. However, only about 6 students in all *MLMT* schools identified as Aboriginal, and so it is not possible to draw any conclusions from this evaluation on the impact of *MLMT* on the educational outcomes for Aboriginal students.

Mindful Learning, Mindful Teaching

NPLN Executive Summary and Key Findings

- School staff also generally said that *MLMT* was as effective for ESL/LBOTE students as for non-ESL/LBOTE students. *MLMT* did, however, make teachers more *mindful* about gaps in the knowledge and vocabulary of some ESL/LBOTE students which impacted on their reading comprehension.

Impact on schools key findings

- In the online survey, the majority of teachers agreed that since *MLMT* there is more clarity about their school's goals and expectations on reading outcomes. They also agreed that teaching of reading is now more explicit and focused, and that *MLMT* has resulted in greater transparency and consistency in the way literacy is taught in the school.
- These online survey findings are consistent with the qualitative research. A common theme during school visits was that teachers were now using the same language, the same data to assess student needs, and the same assessment tools, all of which contributed to a collaborative whole-of-school approach.
- School staff said *MLMT* made the school environment more collegiate and supportive. The strong school focus on reading comprehension and the various supports provided to teachers motivated staff to work to a common goal and seek to achieve real outcomes in the reading comprehension levels of students.
- Outcomes varied across schools because each one started *MLMT* at different points

Taking Off with Numeracy (TOWN)

TOWN was developed by NSW DEC TOWN staff to assist teachers to identify where students' numeracy solution methods were breaking down, and provide clear guidance to move the students beyond these barriers. It focused on the key concept of place value, and differentiation of students along a continuum.

The primary focus was on providing professional development and support, for two types of intervention: whole class and an individualised case management component. All schools participating in TOWN signed up for the whole class component, and 28 signed up for the individual case management component.

Under the NPLN, TOWN was implemented in 41 schools around NSW for Years 3-6 students. The schools were selected for participation based on under-performance in numeracy in the 2008 National Assessment Program – Literacy and Numeracy (NAPLAN) testing, the school's suitability and readiness to participate in the program (as advised by regional and diocesan offices), and the school's students' background characteristics. Implementation commenced in Term 3 in 2009 and funding concluded in June 2011.

Survey responses were received from 141 staff across 35 schools.

IMPLEMENTATION OF TOWN

A TOWN leadership team was appointed in each school, including a TOWN Coordinator, who led the provision of targeted and regular professional learning focused on numeracy teaching, and 'hands on' assistance with putting the program into practice including providing or developing teaching resources, assistance with development of lesson plans, encouraging reflection and team teaching approaches etc.

Other forms of support for the implementation of TOWN included an initial two-day training workshop in Sydney, the TOWN website, the TOWN materials (including assessment tools), NSW DEC TOWN staff and regional maths consultants, and Regional Facilitators.

Teachers conducted initial assessments of students, using the TOWN assessment tools, to identify students in need of the program.

The individual case management component of TOWN involved teachers recording interactions between teachers and individual students, uploading these to the TOWN website, and receiving emailed advice from one of a team of TOWN case managers.

Executive summary

OVERALL EFFECTIVENESS OF TOWN

The evaluation clearly demonstrates that TOWN has had a positive impact on schools and delivered numeracy outcomes for teachers and, in some cases, students.

Overall, the evidence indicates that the whole school component of TOWN has been an effective program which has delivered outcomes for teachers and the NSW schools in which it was implemented. The evidence regarding the impact on student outcomes is more mixed and equivocal, however, depending on the data source(s).

The data gathered for the evaluation raises questions about the extent to which the success of the program was due to the TOWN program itself, or to the implementation of TOWN by schools (which was prompted by TOWN).

The effectiveness of the program was arguably over-reliant on schools expending considerable effort to operationalise the program into practice, through professional development (as intended) and

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development of their own practical resources such as lesson plans and teaching resources. It is also apparent that school staff under-utilised some of the forms of support available (e.g. the TOWN website, videoconferences, NSW DEC TOWN staff and the TOWN case managers) because they did not regard them as very useful and/or what they ideally needed.

It is likely that this resulted in a considerable amount of ‘reinventing the wheel’ and duplication of effort across the schools implementing the program, as they each determined how to best put the program into practice and developed materials and resources of their own. It may therefore be more accurate to view TOWN as a ‘process’ or a ‘catalyst’ for a changed approach to numeracy teaching, rather than a ‘program’ as such. Therefore TOWN was effective mainly because it was, on the whole, implemented effectively by most schools. However, there was not enough provided as part of the initiative to make it effective as a stand-alone program in itself. In the consultants’ view, there was some legitimacy to the strong view about TOWN by a number of school staff that there ‘wasn’t enough to it’, that it was too thin and high level, and did not provide enough ‘value for money’.

This view in turn reflected what NSW DEC TOWN staff perceive as a fundamental misunderstanding by a number of schools about the nature of the program. Many schools were expecting or hoping for a more complete resource package, whereas according to DEC TOWN staff the primary focus of the program was always on it being a professional development and learning program. It is likely that imperfect and limited communication with schools, particularly in the context of a tight timeframe for program rollout in which the program was being developed during the implementation phase, contributed to this misunderstanding.

INDIVIDUAL CASE MANAGEMENT

The evaluation indicates that the individual case management component was the least successful aspect of the TOWN program. . It was not used very much at all (only 136 instances over the entire program), and it did not work very effectively as a source of support to schools. This was for a range of reasons included technical difficulties relating to making and uploading the video recordings of students, and the perception that the advice provided by the case managers was not seen as useful (in terms of providing very specific, practical guidance about how to work with the particular student) or as timely as it could have been.

There appeared to be some disjunctions between the perceptions of the quality, usefulness and timeliness of the advice provided between case managers and DEC TOWN staff on the one hand, and school staff and Regional Facilitators on the other. This may reflect the desire by school staff for much more directed and practical advice. On the other hand, NSW DEC TOWN staff feel that this was one of the most innovative aspects of the program, and it was therefore not entirely surprising that this was an area where more problems were experienced. There was a view that this aspect may have been a bit ‘ahead of its time’.

OUTCOMES FOR TEACHERS

Overall, evidence from the evaluation is that the whole school component of TOWN (or its implementation) has had a positive and marked impact on the numeracy teaching practice of most school staff that participated in the program, and made them better numeracy teachers.

The majority of teachers surveyed reported that TOWN has had an impact on their knowledge, attitudes and skills in all of the areas they were asked about. The three areas with the greatest reported impact were:

- increased belief in teachers’ ability to improve numeracy outcomes for all students
- increased understanding of the importance of place value as a key numeracy concept
- increased willingness to participate in shared reflection and discussion of numeracy teaching with other staff.

The program has also had a positive impact on a number of key elements of teaching practice, such as:

- increased use of and capacity to differentiate students and identify students in need of targeted intervention, greater collaboration and ability to reflect on their teaching practice
- use of more and additional numeracy teaching resources and activities
- greater knowledge about and confidence in teaching numeracy
- greater focus on and understanding of key numeracy concepts such as the place value framework.

There is evidence to indicate the greatest impacts were for teaching staff either at an *early* or at a *late* stage of their careers.

OUTCOMES FOR STUDENTS

The evidence regarding the impact of TOWN on students is more mixed and equivocal. This evaluation analysed the effectiveness of TOWN for students by looking at three data sources, including NAPLAN and NPLN assessment data supplied by NSW DEC, online survey data and qualitative data collected during school visits. The online survey and qualitative data indicates that teachers in particular think TOWN has improved the numeracy skills of students in TOWN schools. However, the NAPLAN and NPLN data is more equivocal on this issue.

Aggregate student data collected from NAPLAN and NPLN assessments was analysed to review the change in student numeracy outcomes over the NPLN period for each student cohort. A range of limitations on the reliability and validity of results observed in these data sets have been outlined in this report; these should be considered when drawing conclusions from the results discussed.

In both data sets (NAPLAN and NPLN assessments), gains in mean numeracy scores were observed for all student cohorts at TOWN schools. However, in both NAPLAN cohorts (students in Year 3 in 2008 and 2009), students at TOWN schools achieved marginally lower numeracy score gains than for students across the State as a whole. In most cohorts, the numeracy growth observed for students at schools implementing both the TOWN whole school and the TOWN individual intervention was slightly higher than that for all schools implementing the TOWN whole school program.

School staff, however, are of the view that TOWN has had a positive impact in improving numeracy outcomes for students. For example, 77% of staff surveyed felt that the program had been either effective or very effective in this way.

The areas where improvements in students were most commonly observed by teachers related to: students' maths skills; use of effective strategies to assist them doing maths; and students' confidence in and enthusiasm for doing maths.

OUTCOMES FOR ABORIGINAL STUDENTS

The evaluation does not indicate differential impacts of TOWN on Aboriginal students. Teachers are mainly of the view that TOWN works equally well with both Aboriginal and non-Aboriginal students.

The analysis of the NAPLAN and NPLN data by Aboriginality did not provide any evidence to counter this view. For the NAPLAN data the gain scores for Aboriginal students were slightly higher than for non-Aboriginal students, but the reverse was true for the NPLN data. The validity of these results is limited due to the small sample size of Aboriginal students completing these assessments at TOWN schools (180 students or less for both forms of testing).

IMPACT ON SCHOOLS

The quantitative and qualitative consultations indicated that in most schools there have been major changes in school practices around numeracy teaching, including being more explicit and focused, having greater clarity around outcomes, and greater consistency and transparency.

A further positive outcome for schools identified by staff at a number of schools in the qualitative consultations was that TOWN will have a positive impact in future on other aspects of teaching in the school beyond numeracy – for example, due to greater confidence and expertise amongst teachers, and applying key concepts such as differentiation and a continuum approach to other areas of the curriculum.

CRITICAL SUCCESS FACTORS

The critical success factors identified which were associated with greater teacher engagement and improvements in numeracy teaching were:

- changed numeracy teaching practice
- strong school leadership
- an enthusiastic and skilled TOWN Coordinator devoting intensive time to the program
- staff who were more open to new teaching approaches
- experience with similar numeracy programs.

STRENGTHENING THE IMPACT OF TOWN

Drawing on the suggestions made by school staff and the findings of the evaluation overall, the following are the greatest priority areas where the impact of the program could be strengthened were to be offered again in the future:

- Further pre-planning, preparation and testing of the program prior to launching in schools. This includes developing a much more substantial package of resources (hard copy and/or online) which clearly sets out the nature of the program and what to expect from it over the period of implementation, provides much more practical guidance about how to operationalise it in practice (including implementation guides, advice on programming, sample lesson plans and teaching resources and activities), and explains how TOWN fits into the more general maths curriculum. The aim should be to reduce the amount of time required to be spent by each individual school conducting the same kind of activities to sort out how to implement the program.
- Providing an easy online system to allow schools to share resources they have developed (and any tips about how to use them), and to publicise these to other schools.
- Providing funding to cover the off-class time for the TOWN Coordinator, including at least half-time at critical periods of the program's implementation. (Note however that if the strategy outlined above were implemented, this would reduce the amount of time required for the TOWN Coordinator.) This is because the evaluation findings suggest this is a critical success factor for implementing the program, and it is not viable to implement the program successfully otherwise.
- Investigating further strategies to allow for more face-to-face and hands on support to schools to implement the program. This could include, for example, giving regional maths consultants a formal role in this, and providing at least two face-to-face training workshops for staff implementing the program (one initially and one part-way through implementation).
- Consider reducing the cost of participation in the program to a level which will be seen as providing 'value for money' by schools.
- Considering other mechanisms to encourage greater information-sharing and support between schools at a regional level.

SUSTAINABILITY

There are some questions over the extent to which TOWN approach will be sustainable beyond the end of the funding period. While 75% of survey respondents felt there was a clear pathway for this, in the qualitative consultations staff expressed more mixed views about whether this would happen in practice, in the absence of dedicated funding. This may reflect the fact that schools have found that effective implementation of TOWN requires a quite resource-intensive approach, driven by a skilled Coordinator with a fair amount of time off-class.

The evaluation suggests that success factors which will make it more likely that the TOWN approach to teaching numeracy will be sustained in schools include:

- the degree to which the TOWN approach has been embedded into numeracy teaching at the school
- whether schools have developed an effective set of teaching resources associated with the program
- having a training strategy for new and existing staff
- the availability of resourcing through other channels.

Section Findings

Implementation of whole class component of TOWN key findings

- A leadership team was established in each TOWN school to oversee the implementation of the program, including a dedicated TOWN Coordinator who drove implementation in the school through a range of activities such as organising and conducting professional development, gathering and/or developing resources, providing assistance with developing lesson plans etc, and facilitating team teaching. Other forms of support provided by DEC included: an initial two-day TOWN workshop, regular teleconferences facilitated by NSW DEC on a regional basis; the TOWN website, TOWN materials, DEC TOWN staff (both in central office and maths consultants), and Regional Facilitators.
- Overall, there were variable levels of satisfaction by school staff with these types of support provided to implement TOWN.
- There was a high level of satisfaction by school staff with the support given by the TOWN Coordinators and regional maths consultants (for those schools which had access to them). This was because these sources provided practical, hands-on assistance and in the case of the TOWN Coordinators, regular professional development.
- On the other hand, there were much more mixed views amongst school staff about the value and sufficiency of the initial TOWN workshop, videoconferences, TOWN website, TOWN materials, and support from DEC TOWN staff. A key theme here was that while these sources of support were felt to provide a reasonable starting point for implementing the program, they did not go far enough. Many school staff would have liked more practical and directed assistance, advice and materials provided through these sources, to help translate the 'bare bones' of the TOWN program into an approach that could be easily and efficiently implemented in practice, without having to invest a considerable amount of resources at a school level (which they often did).
- This situation may reflect a combination of factors, including:
 - a misperception by school staff about the nature of the TOWN program (i.e. as a resource package rather than primarily as a professional development package)
 - some technical and other limitations to the way in which some of the support was provided (e.g. it may have been preferable to have some more face-to-face support provided instead of relying only on videoconferences and telephone support beyond the initial training workshop)
 - the fact that staff did not always use the sources of support as much as they could have (which in turn reflected their perceived usefulness).

Implementation of the individual case management component of TOWN key findings

- The individual case management component of the TOWN program involved teachers recording interactions between teachers and individual students, uploading these to the TOWN website, and receiving emailed advice from one of a team of TOWN case managers. Case managers were appointed based on having specific skills relating to numeracy teaching.
- The quantitative and qualitative data consistently and strongly indicate that this was the least successful aspect of the TOWN program. It was not used very much at all (only 136 instances over the entire program), and it did not work very effectively as a source of support to schools. This was for a range of reasons including technical difficulties relating to making and uploading the video recordings of students, and the perception that the advice provided by the case managers was not as useful (in terms of providing very specific, practical guidance about how to work with the particular student) or timely as it could have been.
- There appeared to be some disjunctions between the perceptions of the quality and usefulness of the advice provided between case managers and DEC TOWN staff on the one hand, and school staff and Regional Facilitators on the other. This may reflect the desire by school staff for much more directed advice.

Outcomes for teachers key findings

- Overall, TOWN (or its implementation) has had a positive and marked impact on numeracy teaching amongst most school staff who participated in the program.
- The majority of teachers surveyed reported that TOWN had had an impact on their knowledge, attitudes and skills in all of the areas they were asked about. The three areas with the greatest reported impact were: increased belief in teachers' ability to improve numeracy outcomes for all students; increased understanding of the importance of place value as a key numeracy concept; and increased willingness to participate in shared reflection and discussion of numeracy teaching with other staff.
- The program has also had a positive impact on a number of key elements of teaching practice, such as increased use of and capacity to differentiate students and identify students in need of targeted intervention, greater collaboration and ability to reflect on their teaching practice, use of more and additional numeracy teaching resources and activities, greater knowledge about and confidence in teaching numeracy, and greater focus on and understanding of key numeracy concepts such as the place value framework.
- The greatest impacts reported in the online survey were for teaching staff at an early or late stage of their careers.
- Five key success factors were identified which were associated with greater teacher engagement and improvements in numeracy teaching, including: changed numeracy teaching practice; strong school leadership; an enthusiastic and skilled TOWN Coordinator devoting intensive time to the program; staff who were more open to new teaching approaches; and experience with similar numeracy programs.

Outcomes for students key findings

- Overall, school staff felt that TOWN has had a positive impact in improving numeracy outcomes for students: 77% of staff surveyed felt that the program had been either effective or very effective in this way.
- Both the quantitative and qualitative data consistently indicated that the areas where improvements in students were most commonly observed related to: students' maths skills; use of effective strategies to assist them doing maths; students' confidence in doing maths; and students' enthusiasm for doing maths.

Taking Off With Numeracy

NPLN Executive Summary and Key Findings

- The key factors identified underpinning successful implementation of TOWN were: making maths fun and practical; differentiation and grouping of students by level of ability; using a range of different numeracy strategies.
- The predominant view amongst those consulted in both the quantitative and qualitative consultations was that TOWN is just as effective for Aboriginal and non-Aboriginal students, although a sizeable minority in both were unsure about this issue. This may reflect the small number of Aboriginal students in the program at many schools.

Impact on schools key findings

- The TOWN program has had an impact on school practices in a number of ways, including making numeracy teaching more explicit and focused, providing greater clarity about the school's goals and expectations in relation to numeracy outcomes, and resulting in most students embedding numeracy teaching into everyday classroom teaching.
- Differing views were expressed in the quantitative and qualitative consultations regarding whether the TOWN approach will be sustainable beyond the end of the funding period. On the one hand, some 75% of survey respondents felt there was a clear pathway for this. In the qualitative consultations on the other hand, while there was strong support for the value of this occurring, staff expressed more mixed views about whether this would happen in practice, in the absence of dedicated funding.
- A further positive benefit of the TOWN approach identified of relevance to sustainability is that it will have a positive impact in future on other aspects of teaching in the school beyond numeracy.