Strategic Review of the Outcomes of Evaluations of Literacy and Numeracy Programs

NSW Smarter Schools National Partnership on Literacy and Numeracy

Strategic Review of Literacy and Numeracy Programs Final Report

Project DETSSNP1027 Variation 2

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# Table of Contents

EXECUTIVE SUMMARY ................................................................................................................. 3

CHAPTER 1: INTRODUCTION AND BACKGROUND ............................................................................ 13

CHAPTER 2: PROJECT OBJECTIVES .................................................................................................. 15

CHAPTER 3: PROJECT METHODOLOGY .............................................................................................. 16

CHAPTER 4: FINDINGS OF THE STRATEGIC ANALYSIS ................................................................. 19

4.1 Which factors or contexts have enabled the most significant improvements for student outcomes for each program? Which programs appear to be best suited to a range of different circumstances? ................................................................................................................. 19

4.2 What factors have hindered significant improvement in student outcomes, and to what extent have they been/could they be addressed? ......................................................................................................................... 39

4.2 What factors have hindered significant improvement in student outcomes, and to what extent have they been/could they be addressed? ......................................................................................................................... 39

4.3 To what extent has each program resulted in significant ongoing improvements in teacher confidence and capacity to teach core literacy and core numeracy skills? ...... 45

4.4 Have schools developed or changed their practice in identifying, monitoring and tracking students who are selected for these literacy and numeracy programs? .......... 47

4.5 Relative cost-effectiveness of the Literacy and Numeracy programs ........................................ 49

4.5.1 Did students not directly participating in the program benefit indirectly? ......................... 59

4.5.2 What are the ongoing cost implications of sustaining these programs in schools? .......... 60

4.5.3 Were there unintended consequences? If so, what were the costs /benefits? .................... 61

CHAPTER 5: DISTILLATION OF EFFECTIVE PRACTICES .............................................................. 62

5.1 Common trends in the evaluation findings relating to factors leading to success in numeracy/literacy ................................................................................................................................................. 66

CHAPTER 6: CONCLUSION ................................................................................................................ 82

CHAPTER 7: NEXT STEPS .................................................................................................................. 84

Required deliverables for Phase 2b ............................................................................................... 84

BIBLIOGRAPHY .................................................................................................................................. 86

RESOURCES AND TOOLS ................................................................................................................ 87

APPENDIX 1: SUMMARY OF FINDINGS OF DESK ANALYSIS .................................................... 89
Strategic Review of the Outcomes of Evaluations of Literacy and Numeracy Programs

Executive Summary

Introduction and Background

The Bilateral Agreement between NSW and the Commonwealth Government required an evaluation of the reforms undertaken through each of the Smarter Schools National Partnerships. The New South Wales evaluation strategy for the National Partnership on Literacy and Numeracy (NPLN) has two components:

- Major strategic evaluations contracted on behalf of the NSW Minister for Education, and managed through the Secretariat to the Centre for Education Statistics and Evaluation (CESE) Advisory Council. The first phase of the main strategic evaluation of the National Partnership on Literacy and Numeracy, Evaluation of the Implementation and Take-up of new Literacy and Numeracy Practices, was undertaken by Erebus International.

- Specific program level evaluations commissioned by the NSW Department of Education and Communities (DEC) and managed through the DEC Student Engagement and Program Evaluation Bureau (SEPEB). Four of these evaluations were conducted by Urbis Pty Ltd: Taking Off With Numeracy, Multilit, Mindful Learning, Mindful Teaching and Focus on Reading 3-6. The other four evaluations: Accelerated Literacy, Individualised Learning Plans, QuickSmart and Reading to Learn were conducted by SEPEB.

This report is part of Phase Two (2b) of the strategic Evaluation of the Implementation and Take-up of new Literacy and Numeracy Practices. Phase One was to evaluate the uptake and implementation of the National Partnership for Literacy and Numeracy (NPLN) in NSW schools. The evaluation project has since expanded to include a strategic meta-analysis of the eight program evaluations managed through SEPEB(Phase 2a), the development of an online resource (Phase 2b) to promote effective practices identified through Phase One and Phase 2a, and the sustainability of changes observed during the NPLN (Phase 3). The relationship between the phases is shown in the Figure below.
Objectives of Phase 2: the *Strategic Review of the Outcomes of Evaluations of Literacy and Numeracy Programs*

This project was designed to:

- undertake a comparative analysis *(Phase Two (a)) of the findings of the program level evaluations*, including:
  
  - A comparative overview of the findings of the program level evaluations in order to inform decisions about literacy and numeracy programs and practices at both local school and system/sector level
  
  - Identification of local and system/sector-level contexts in which each program works best for students
  
  - Identification of factors such as effective support mechanisms for planning and implementation which facilitate enhanced student outcomes for each program
  
  - Examination of the cost-effectiveness of the programs.

- develop an online resource for schools *(Phase Two (b)) to facilitate sharing of the major findings of this overall comparative analysis.*

**Evaluation questions**

The strategic analysis of the program level evaluations was driven by the following key research questions:

a) Which factors or contexts have enabled the most significant improvements for student outcomes for each program? Which programs appear to be best suited to a range of different circumstances?

b) What factors have hindered significant improvement in student outcomes, and to what extent have they been/could they be addressed?

c) To what extent has each program resulted in significant ongoing improvements in teacher confidence and capacity to teach core literacy and core numeracy skills?

d) Have schools developed or changed their practice in identifying, monitoring and tracking students who are selected for these literacy and numeracy programs?

e) What is the relative cost effectiveness of the programs and what are the ongoing cost implications of sustaining these programs in schools?

f) Are there any conclusions to be drawn about the relative effectiveness of (i) withdrawal programs and (ii) One-to-one interventions vs. whole class programs?
Project Methodology

The following methodology was used to address the aims of the project:

1. Desk Analysis

This has involved a comprehensive content analysis of each of the eight Program Evaluation reports, to identify common factors leading to success in numeracy/literacy, gaps in knowledge, approaches to the implementation and use of programs, and the relationship between professional learning and student outcomes.

2. Interviews with Sector Representatives

Interviews were conducted with representatives of the Government, Catholic and Independent school sectors who had been involved in the implementation and evaluation of the NPLN programs to:
- validate the emerging findings
- identify related initiatives that contribute to the achievement of enhanced student outcomes in literacy and/or numeracy,
- identify examples of good practice in National Partnership schools.

3. School Case Studies

The data from the above two steps provided a basis for more comprehensive validation of findings through ten school case studies. The case studies yielded examples of good practice in relation to the use and implementation of the funded programs, that could also be used in the interactive online resource.

Findings of the Strategic Analysis

The findings of this analysis confirm findings from Phase One of the evaluation (Wyatt and Carbines, 2012) that it is the combination of reform elements, not one aspect in particular, that makes a difference in creating sustainable change. In considering the impact of any single intervention, the complex interplay between the school context, other state-wide and national initiatives and the effects of the particular program need to be taken into consideration. The specific findings from the analysis discussed below need to be viewed in this context.

i. Which factors or contexts have enabled the most significant improvements for student outcomes for each program? Which programs appear to be best suited to a range of different circumstances?

A whole-school approach

Foremost among those practices having a positive association with student learning outcomes was the use of an agreed whole school reform agenda that underpinned school leadership to ensure a consensual focus of teacher activity to address identified learning needs of all students. The NPLN differed from previous reform initiatives by requiring school
wide (or at least Years 3-6) implementation of interventions and whole class programs. School-wide professional learning in relation to the programs supported this approach.

**Focus on sustainability**

While teachers generally supported the notion of the continued implementation of the NPLN initiative, they were somewhat divided in how sustainability could be achieved in the longer term. Some suggested that where capacity building had been undertaken within the school, there would be minimal need for ongoing resourcing to sustain changes in the longer term. Similarly, in some school settings, funds have been used extensively to develop resources and expertise during the period of the Partnership.

**Committed leadership**

The meta-analyses of the eight program evaluations also identified that the most successful schools were guided by a principal and/or executive who demonstrated strong commitment to the intervention and drove its implementation as a whole school priority. This leadership was also accompanied by a commitment to cultural change and ongoing and structured support of staff to share some responsibility for successful implementation and improvement in literacy teaching practices and literacy learning. In these schools, the programs were seen as a means to achieve whole school reform rather than an end in themselves.

**Professional learning**

Among the many benefits drawn from the implementation of the whole class programs was the shared professional learning provided to teachers. Teachers reported increased collaboration, sharing resources and professional dialogue. Each of these factors combined to have a positive impact on teacher confidence to try new ideas in relation to each school's intervention.

**Effective use of data**

The increased and systematic use of student data was a firm foundation for making decisions about student progress as well as to inform pedagogy. Useful student data included in-school assessments as well as external outcomes data, for example NAPLAN results, in determining the most appropriate learning experiences for students. Teacher and school leader use of data in planning and monitoring student progression was facilitated by NPLN wide professional learning (e.g. in relation to use of SMART data) and the need to assess students for entry and exit from interventions such as Quicksmart and MULTILIT.

**Which programs are best suited to a range of different circumstances?**

The data in the evaluation reports does not allow causal links between programs or program features and student outcomes to be drawn and is not consistent in demonstrating enhanced student learning outcomes as a result of the programs. Nor is it possible to establish the unique contribution of the programs on student results. In some cases there would appear to be a misalignment between in-school assessment results and published NAPLAN data on student learning outcomes. Despite this, each of the eight interventions has
claimed to have had some impact on student improvement in learning outcomes. Those programs that adopt a whole of school or whole of class approach can be more readily generalised across a range of learning contexts. In this regard, the **Accelerated Literacy** program and the **Reading to Learn** (often referred to as R2L) program require a whole of school approach. The **Focus on Reading 3-6** program is suited to a whole of class context. In contrast, **MULTILIT** and **QuickSmart** are not applicable to a wide range of learning circumstances.

**Taking Off With Numeracy** (TOWN) can be employed both in a whole class setting and on an individual case management basis. While the evaluation of the TOWN intervention demonstrated an overall positive impact for students the validity and reliability of the data gathered to determine its overall impact on improving students’ learning outcomes in numeracy are questionable. TOWN was more frequently criticised, had lower ratings of providing value for money and was seen as less sustainable than other approaches.

**Mindful Learning Mindful Teaching** (MLMT) is neither a whole school intervention program nor a targeted approach for individual students. Designed to facilitate reading comprehension for students, MLMT is centred on an inquiry cycle which allows for a personalised approach.

The **Individual Learning Plans** (ILP) provide targeted intervention for at-risk students, focusing on the student’s individual strengths and areas for development in order to raise their achievement. The data does not allow conclusions to be drawn about the impact of the planning process on student achievement, however, not all teachers found this approach to be helpful, citing the amount of work required as an impediment. Several schools developed “short cuts” that met the letter of the implementation requirements but which circumvented the real intentions of individualised learning plans. The majority of schools believed it would be difficult to sustain the ILP process without continued funding for teacher release time.

**ii. What factors have hindered significant improvement in student outcomes, and to what extent have they been/could they be addressed?**

The most commonly recurring factors that have hindered significant improvement in student outcomes using the interventions include the following:

1. Perceived mismatch between student external test measures and internal assessments.
2. Gaining access to both human and resource support to facilitate implementation of the interventions
3. Ensuring that teachers had the prerequisite skills and understandings to effectively implement the interventions
4. Ensuring ongoing enthusiastic and committed leadership by school principals.

In addressing each of the above issues, schools consistently advised the need for additional funding to ensure effective implementation and sustainability of the impact of the intervention. Interestingly, in those schools where implementation was both efficient and
effective, there was clear evidence of committed school leadership, collaborative decision-making and a clear future direction. Many of the above issues were anticipated and appropriate solutions identified before the implementation process. Despite this, the timeline for achieving the enhanced learning outcomes was also identified as an inhibitor. The body of the report provides greater detail in relation to the challenges of implementing the eight interventions.

iii. To what extent has each program resulted in significant ongoing improvements in teacher confidence and capacity to teach core literacy and core numeracy skills?

Teachers in many schools have indicated that participation in the intervention program and the accompanying professional learning opportunities has challenged many of the traditional paradigms under which they have undertaken classroom practice. Other teachers have reported that the programs have confirmed their approach to pedagogy.

Teachers have been able to understand the inherent logic and methodology of the relevant intervention in which they have been involved and generally the fidelity of implementation has been a positive feature of their work. The exception to these situations has been where some teachers, for example in relation to Accelerated Literacy, perceived the workload to be excessive relative to the return it could provide for enhanced student learning outcomes.

Most commonly however the vast majority of teachers across all interventions consistently appreciated the opportunity that professional learning and participation have given them to build their capacity, not only in terms of specific strategies for teaching literacy and/or numeracy, but also in terms of their general pedagogy.

iv. Have schools developed or changed their practice in identifying, monitoring and tracking students who are selected for these literacy and numeracy programs?

It is not possible in many of the participating schools to identify pockets of changed practice and teacher behaviour that may lead to genuine and enduring cultural change in the future, because of the short timeline between implementation and evaluation. Acknowledging these limitations, both leaders and teachers have consistently cited across almost all intervention programs, the increased and systematic use of student data as the foundation for making informed decisions about student progress and about teacher planning for pedagogy. The analysis highlights that the use of student data for tracking and monitoring has not been a priority to the same extent in relation to those intervention programs whose key methodology is withdrawal from regular classroom contexts.

v. Relative cost-effectiveness of the Literacy and Numeracy programs

It is possible only to gain some indicative insights into the relative costs involved in the implementation of each program, as individual schools implemented the various programs in slightly different ways. Tables 9 and 10 in the body of the report highlight individual program costings. Generally, all of the whole class programs were high cost, as they involved all teaching and learning support staff in multiple days of training. Despite this, school leaders report that the programs (with the exception of TOWN) provided good value for money,
given the extent of change in teaching and learning practices and collegial interactions made possible through the expenditure.

Three programs designed as individual interventions are included in this analysis – the TOWN (optional) intervention program; Quicksmart and Making Up For Lost Time in Literacy (Multilit). As each of these is fundamentally different it is not possible to compare them directly. However, it is evident that for both Multilit and Quicksmart that although the initial start-up costs are significant, to the extent that they include initial training and some resources, they are relatively good value for money.

It is not intended that such interventions are being criticised in any way. On the contrary, both Multilit and Quicksmart had a different purpose within the LNNP methodology, namely for providing direct and targeted assistance to students requiring specific assistance in literacy or numeracy. It is acknowledged that, in terms of their applicability, both intervention programs can be used both individually and in small groups.

vi. Did students not directly participating in the program benefit indirectly?

Most of the participating schools chose to train all staff in the relevant programs, not just the current teachers of students in Years 3-6. Many schools also facilitated access to professional learning for the intervention programs for other support staff in the school. This enabled the transference of some of the teaching and learning strategies in both the intervention programs being used in regular classrooms, and the broader concepts relating to scaffolded learning and student engagement being applied in K-2 classrooms (the specific techniques of Accelerated Literacy and Reading to Learn not being suitable for beginning readers). One small additional benefit to students not in NPLN schools was noted where schools operated in clusters or communities of schools.

vii. What are the ongoing cost implications of sustaining these programs in schools?

The data clearly indicates that all of the programs require ongoing financial commitment for them to remain viable in individual schools. The timeframe for the NPLN was such that there can be no certainty that the reform agenda had become firmly embedded in each participating school. Yet, across all of the program evaluation reports, there was a firmly expressed view from principals and teachers that continued funding would be necessary for ongoing training, especially when staff turnover was high (as it is for many of these schools).

viii. Were there unintended consequences? If so, what were the costs /benefits?

There have been few truly unintended or unanticipated outcomes, (either positive or negative) noted in the program level evaluations. The wider benefits identified have been considerable (such as increased principal collegiality within districts), but are not quantifiable from the evaluation reports in terms of either costs or ultimate impacts. Similarly, flow-on benefits for students were noted in all programs, such as increased engagement, increased interest in reading, increased on-task behaviour (none of which were quantified) contributing to more pleasant and productive classroom environments.
Distillation of effective practices

While the analysis of the eight program evaluations revealed a wide range of effective practices, these were initially organised around responses to each of the key evaluation questions for this project. To further validate these findings, the effective practices were then examined in light of the recently completed *Evaluation of the take-up and sustainability of new literacy and numeracy practices in NSW schools* (Wyatt & Carbines, 2012). The resulting nine themes of effective practices appear related to the implementation of literacy and numeracy programs across National Partnership schools in all three sectors.

Common trends in the evaluation findings relating to factors leading to success in numeracy/literacy

These nine themes will facilitate the development of a resource aimed at school based practitioners are highlighted in Table X below. Their links with enhanced student engagement and learning are strongly supported by contemporary empirical national and international research.

Table i: Themes and Descriptions for Effective Practices

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreed whole school reform agenda</td>
<td>A clear and collaboratively established whole school reform agenda that is underpinned by effective use of data, contemporary research in teaching and learning and systematic delivery to address the learning needs of all students.</td>
</tr>
<tr>
<td>Inspirational instructional leadership</td>
<td>Leadership actions that inspire whole school community commitment towards an agreed vision for enhanced student learning and quality teaching. This must ensure that policies and procedures systematically facilitate effective and efficient school operation, particularly in relation to literacy and numeracy.</td>
</tr>
<tr>
<td>Purposeful student engagement</td>
<td>The promotion of a systematic approach towards student engagement in learning that is driven by a clear analysis of student learning needs in literacy and numeracy. This approach is accompanied by a positive, safe and secure learning environment that ensures appropriate learning provision for each student as a unique individual who is empowered to take responsibility for their own learning.</td>
</tr>
<tr>
<td>Differentiated teaching and learning</td>
<td>An approach to the teaching and learning of literacy and numeracy, that is underpinned by the application of teaching and learning methodologies that reflect a strong understanding of each student’s individual learning needs and contemporary research in classroom pedagogy.</td>
</tr>
<tr>
<td>Evidence based decision making</td>
<td>The development of systematic practices that ensure decisions are made and information reported, based on wide ranging qualitative...</td>
</tr>
</tbody>
</table>
and quantitative evidence at the classroom and whole school level about student achievement and whole school effectiveness.

| **Responsive teaching approaches** | The application of teaching methodologies, including explicit teaching, that is understood by classroom practitioners and directly responds to students’ identified learning needs. |
| **Collaborative whole school culture** | All members of the school community actively participate in and are committed to the common purpose of enhanced student literacy and numeracy learning through engaging in professional dialogue, collaborative planning and the systematic exchange of resources, programs and ideas. This level of commitment and activity is reflected in a culture of shared responsibility for the learning well-being of all students in the school. |
| **Targeted professional support** | The provision of tailored professional learning opportunities for all members of the school community to enhance their effectiveness in relation to whole school leadership, classroom and school community responsibilities and contribute directly to a culture of continuous improvement. |
| **Tailored resource utilisation** | The ongoing provision of tailored human, physical and technological resources designed to facilitate the teaching and learning process. |

**Conclusion**

While the intervention programs cannot be directly compared, each was credited with having a positive impact on the culture of teaching and learning across the participating schools, particularly in helping teachers be more responsive, engaging and purposeful in their practice. While the measured student outcomes data are ambiguous, the reports collectively indicate observable changes in student behaviour and attitudes towards literacy and numeracy.

These results should not be taken as an unreserved endorsement of any of the programs or approaches *per se*, nor (with the possible exception of TOWN) can they be interpreted as indicative of cause for widespread discontinuation. The programs were not implemented as part of a clinical trial of the interventions in which their unique impact might be assessed. They were implemented as part of a suite of reform elements that all collectively aimed to enhance literacy and numeracy in the schools involved by increasing teachers’ capacity to use data, to engage in critical reflection and to adopt a more collaborative and collegial way of working. It is arguable that the broader reform contributed more to the results observed than any of the programs themselves.
These principles or “effective practices” are consistent with the effective schools and quality teaching research literature highlighted by previous researchers such as Hattie (2009), Zbar et al (2010) and Masters (2010).

As indicated earlier, where the findings of this analysis do diverge from the previous research is the emphasis on the interaction between school efforts, programmatic effects and systemic support. The program evaluation reports confirm the conclusion reached in Wyatt and Caribnes’ (2012) evaluation of the NPLN in NSW: it is the combination of reform elements, not one aspect in particular, that makes a difference in creating sustainable change. In future school improvement efforts, schools cannot pick and choose from among the practices but must address all areas. This conclusion suggests that systemic efforts to support school improvement are both warranted and justified. While the research literature and the results of this analysis all highlight the importance of strong principal leadership in driving change, it is evident that the pace of change can be escalated with focussed external support. This would be the case particularly if the existing school culture was deeply entrenched, ineffective teaching practices based on outdated knowledge and skills the norm, and student outcomes seen as a product of the students’ backgrounds rather than a result of teachers’ practices.

The website planned as the next stage of development of this evaluation will be a valuable opportunity to assist schools to identify areas for future development. It is important that practitioners are able to easily access authentic examples relevant to their own context to visualize potential in their own school.
STRATEGIC REVIEW OF THE OUTCOMES OF EVALUATIONS OF LITERACY AND NUMERACY PROGRAMS

Chapter 1: Introduction and Background

The Bilateral Agreement between NSW and the Commonwealth Government required an evaluation of the reforms undertaken through each of the Smarter Schools National Partnerships. Evaluations are designed to guide future education policy and funding decisions, to support management and monitoring efforts at school, system and sector levels, and to inform the Council of Australian Governments (COAG) on the impact and success of the reforms and how best to sustain them.

New South Wales’ evaluation strategy has two components:

- Major strategic evaluations, contracted on behalf of the NSW Minister for Education, and managed through the Secretariat to the Centre for Education Statistics and Evaluation (CESE) Advisory Council
- Specific program level evaluations, commissioned by the NSW Department of Education and Communities (DEC) and managed through the DEC Student Engagement and Program Evaluation Bureau (SEPEB).

The current report builds on Phase One of the strategic evaluation of the Literacy and Numeracy National Partnership (NPLN) – Evaluation of the take-up and sustainability of new literacy and numeracy practices in NSW schools (DETSSNP 1027) undertaken by Erebus International in 2012. The relationship between the various phases of the strategic evaluation of the NPLN are shown in Figure 1 below.

The major focus of the current project (referred to as Phase 2 of the main NPLN evaluation in this document) is an analysis of the outcomes of the eight program level evaluations. Each of these evaluations examined literacy and numeracy programs implemented in the government and Catholic school sectors, through the NPLN.

Four of these evaluations were conducted by Urbis Pty Ltd: Taking Off With Numeracy, Multilit, Mindful Learning, Mindful Teaching and Focus on Reading 3-6. The other four evaluations: Accelerated Literacy, Individualised Learning Plans, QuickSmart and Reading to Learn were conducted by SEPEB.

Analysis of the outcomes of the program level evaluations in Phase 2a included:

- a comparative overview of the findings of the program level evaluations in order to inform decisions about literacy and numeracy programs and practices at both local school and system/sector level,
- identification of local and system/sector-level contexts in which each program works best for students,
• identification of factors such as effective support mechanisms for planning and implementation which facilitate enhanced student outcomes for each program, and
• examination of the cost-effectiveness of the programs.

Figure 1: Outline of NPLN Evaluation stages

It is intended that the findings of this strategic review be of use to individual schools, beyond the NPLN. The project outcomes are designed to inform schools in their selection and implementation of the most relevant and effective programs for their particular circumstances, as well as informing systemic decision making/policy. The deliverables of this project include the development of an on-line resource to share information and advice with schools across the government, Catholic and independent sectors.

It should be noted that in analysing the eight program evaluations, it has been recognised that the NPLN was of a relatively short duration (i.e., 18 months) and consequently the impact on student learning outcomes may not have been as strong as other outcomes such as teacher competence and confidence.

It is also acknowledged that the original NSW requirements for the NPLN included schools selecting both a whole school (Years 3-6) approach and an intervention for the students most at risk. The whole school programs were designed to be preventative, whereas the intervention program was to support the students who were not succeeding in normal classrooms. The analysis therefore focuses on the factors that contributed directly to the level of success observed on student outcomes, as measured in the evaluations.
Chapter 2: Project Objectives

Phase 2 of the strategic evaluation is designed to:

- undertake a comparative analysis (Phase 2 (a)) of the findings of recently completed program level evaluations as well as
- develop an on-line resource for schools (Phase 2 (b)) to facilitate sharing of the major findings of this comparative analysis.

Phase 2a

Phase 2a has resulted in the present report which has, as its primary purpose, information and advice on key policy implications arising from the meta-analysis of recent evaluations of literacy and numeracy programs implemented in NSW schools.

The implications of the analysis above are relevant across all sectors, even though the program evaluations themselves were undertaken only in the government and Catholic sectors. It should be noted that independent schools did participate in the Erebus Phase 1 survey of schools and school case studies, and will participate in the development of materials for Phase 2b of this project.

Phase 2b

The findings from Phase 2a, together with findings from Phase One, will contribute as resources for Phase 2b, resulting in the development of a user-friendly on-line resource for schools across the government, Catholic and independent sectors.

The resource identify effective practices that facilitate school improvement and enhanced student outcomes in literacy and numeracy and will be tailored to take into account local and system/sector-level contexts in which each program works best for students.
Chapter 3: Project Methodology

The following methodology was used to address the aims of Phase Two:

1. Desk Analysis

The desk analysis was driven by the key research questions outlined below:

i. Which factors or contexts have enabled the most significant improvements for student outcomes for each program? Which programs appear to be best suited to a range of different circumstances?

ii. What factors have hindered significant improvement in student outcomes, and to what extent have they been/could they be addressed?

iii. To what extent has each program resulted in significant ongoing improvements in teacher confidence and capacity to teach core literacy and core numeracy skills?

iv. Have schools developed or changed their practice in identifying, monitoring and tracking students who are selected for these literacy and numeracy programs?

v. What is the relative cost effectiveness of the programs and what are the ongoing cost implications of sustaining these programs in schools?

vi. Are there any conclusions to be drawn about the relative effectiveness of

   a. Withdrawal programs?

   b. One-to-one interventions vs whole class programs?

The desk analysis involved a comprehensive content analysis of each of the eight Program Evaluation reportsto identify:

- Common trends in evaluation findings relating to success in numeracy/literacy (e.g. leadership actions, school culture, classroom pedagogy)
- Gaps in knowledge arising from an analysis of findings from the eight evaluations
- Approaches towards the use and implementation of the funded programs that contribute to enhanced outcomes for students
- The relationship between teacher support and student success with the funded programs.

In drawing conclusions from the desk analysis, consideration was also given to findings from the broader evaluation of the implementation of the NPLN and the Cross-sectoral Impact Survey.

2. Interviews with System/Sector Representatives

The results of the desk analysis enabled more in-depth inquiry into the key evaluation questions. In the first instance, individual interviews were undertaken with identified representatives from each of the government, independent and Catholic school sectors:
• To validate the findings emerging from the meta-analysis of the eight program evaluation reports,

• To identify related initiatives within each sector that contribute to the achievement of enhanced student outcomes in literacy and/or numeracy,

• To identify examples of good practice in National Partnership schools, employing one or more of the funded programs under consideration.

The interviews took the form of a workshop over an approximately two hour period. During this time system/sector representatives worked with Erebus International to identify any gaps in the analysis (particularly in relation to system/sector implications), and any known examples of good practice in relation to the specified programs. This also added to the bank of materials to be considered for the on-line resource.

3. School Case Studies

The data from the above two steps provided a basis for more comprehensive validation of findings through school case studies. Visits to schools were also employed to begin to assemble practical examples relating to the identified success factors, that can be used in the interactive on-line resource. Using the key evaluation questions as a guide, schools invited to participate in case studies were asked to involve relevant members of the school community in sharing examples of good practice.

The ten schools invited for case studies were not randomly selected but identified through consultation with stakeholders as schools “with a story to tell” about how they have enhanced student outcomes in literacy/numeracy. The focus in these schools was on the range of initiatives taken in their school improvement journeys, using the funded programs and related effective practices as a vehicle of change. (The number of schools consulted directly for examples of effective good practice extended to 16, due to requests for sharing by the schools.)

4. Structure of Final Report for Phase 2

The final report for Phase 2 (this report), includes the following:

• An overview and comparative analysis of the findings of all eight program level evaluations

• Examples of effective practices occurring in selected National Partnership schools that can be employed in the development of the on-line resource

• Identification of the next steps in the development of the on-line resource, including outline of content to be included.

In undertaking the analysis of the eight program evaluations through the methodology cited above, it should also be noted that some programs were considered to be whole school intervention is while others were interventions for students at risk. Indeed in some settings it was important that both a whole school/class program and an intervention initiative were required to work together. Throughout this report there has been no intention to compare
whole class or whole school programs with one-on-one or small group interventions. To undertake such comparisons would provide invalid conclusions. Indeed the intervention programs were never designed to deliver outcomes for students in such diverse settings. From this perspective it is important to interpret the conclusions from the evaluation in this in terms of those programs that have a whole class or whole school perspective as opposed to individual intervention programs such as Multilit.
Chapter 4: Findings of the Strategic Analysis

The following sections set out the findings of the analysis of the eight reports arising from the program level evaluations managed by SEPEB. Several caveats, however, should be kept in mind in considering the various findings.

At the outset it should be acknowledged that the findings from the evaluations represent a brief snapshot during a period of implementation that continues in many schools. It can also be assumed therefore that each of the programmes being implemented in schools under consideration will have evolved and changed over time and indeed may no longer be operating in their original form.

These variations not only relate to, for example, the changing costs of implementation, including expendable items relating to the delivery of programs. It should also be noted that schools can no longer access Focus on Reading or Taking off With Numeracy in the same form that the programs were delivered during the National partnership and reviewed during that period. For these reasons it is important that the findings should be considered within this context.

In addition to these caveats, the issue of “fidelity of implementation” was not directly addressed in the evaluations of each of the programs. Indeed, the evaluations cited, in some cases, that the implementation of some programs in some schools was adapted to suit the particular characteristics of the school setting. This resulted in a modified form of implementation, in response to such issues as a scarcity of resources or even professional development of teachers to facilitate implementation, occurring during the implementation period. The consequence of this situation is that on some occasions, it was somewhat unclear just what had been implemented in relation to some programs. Indeed, it may even be suggested that definitive conclusions about the overall efficacy of some programs are difficult to draw.

The findings below are organised around the agreed evaluation for this Phase. The results of all programs are not directly comparable, since these represent a variety of different approaches, purposes and intended target group. Additionally, it was not possible to identify the unique contribution of any particular program given the implementation of broader NPLN initiatives. The evidence presented in the program evaluation reports has been distilled to identify the factors which appeared to have contributed to the level of outcomes observed. These are summarised in the Tables which are shown at Appendix 1.

4.1 Which factors or contexts have enabled the most significant improvements for student outcomes for each program? Which programs appear to be best suited to a range of different circumstances?

Foremost among the practices identified in the strategic evaluation of the Implementation and Take up of the National Partnership Literacy and Numeracy was the importance of an agreed whole school reform agenda that underpinned school leadership and a consensual
focus on teacher activity. This commitment to whole school reform was similarly reported in the program evaluations as fundamental in focussing attention on systematic and consistent classroom practices to address identified learning needs of all students.

The Accelerated Literacy Program

The evaluation of the Accelerated Literacy (AL) program, clearly identified the importance of a whole school approach to teaching literacy to obtain maximum student outcomes. This program is a research-based K-12 literacy teaching methodology, designed to be implemented with whole class groups. One of its major claims is to improve the literacy outcomes of Aboriginal students at an accelerated rate, while improving outcomes for all students in the class.

It is logical that such a program would be most successful when there is active and visible support by the Principal; where the program (and literacy generally) is identified as a whole school priority; which is documented within the school’s annual action plan. Under these circumstances it could be expected that teachers would also receive active professional support to ensure that reading literacy levels are addressed at a whole class level.

The whole school commitment to Accelerated Literacy also relies very strongly on the importance of scaffolded learning from year to year. This includes systematic and collaborative planning and engagement by all teachers, resulting in a teaching sequence that is focused on in-depth analysis of appropriate literacy texts. All of these actions, reported in the Accelerated Literacy program evaluation, are consistent with the findings of the wider strategic evaluation of the NPLN.

The value of the whole school reform agenda in focusing on student learning is demonstrated in the evaluation report for Accelerated Literacy.

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. (SEPEB, 2012a; p.3)

The evaluation report identified the following key findings:

- NAPLAN and NPLN data indicate that minor gains in reading scores were observed at Accelerated Literacy schools for both aboriginal and non-aboriginal students,
- the majority of teachers conclude that Accelerated Literacy is effective for students, regardless of ability, gender or cultural background,
- teachers concluded that reading improvement could be attributed to background knowledge, scaffolding, text selection, examination of text purpose and scaffolded questioning techniques,
most teachers believed that their teaching of reading skills has improved through Accelerated Literacy,

parents commented that their children’s text selection was now more thoughtful and age-appropriate and enjoyment had increased.

It should be noted that in all but one school, Accelerated Literacy was implemented concurrently with a systematic, individualised literacy program intervention, targeting selected students in each class.

While the pedagogical approaches of Accelerated Literacy, such as scaffolded learning, are certainly positive, the evaluation reports suggests that the real success of the program lies in the its implementation, including clear leadership within the school and providing ongoing support for classroom teachers. In particular, the important role played by the enhancement of teachers’ use of NAPLAN results through the SMART data analysis package. This is seen as a key driver of pedagogical change, identifying students’ strengths and areas for development and in providing the moral imperative for change.

The necessity of locating the implementation of specific programs within the broader school reform agenda was also highlighted when the issue of the longer term sustainability of the program post-funding was considered. The Accelerated Literacy evaluation report suggests that while teachers were divided in their beliefs about the longer term viability of the program, in those school communities where capacity building had been undertaken, there would be minimal need for ongoing resourcing and a greater chance that long term sustainability could be achieved.

Similarly, in school settings where National Partnership funds had been used to develop resources and expertise to support program implementation, the potential for longer term success was also considered probable. The following statements from the evaluation report describe this approach:

“*In-school tutors will continue to train staff in Accelerated Literacy without funding because we intended that from the start.*”

“We have access to many resources and have two executives who have had further training. We can access their knowledge at any time and ask for assistance or guidance. There is a lot of sharing among staff of ideas about Accelerated Literacy and its implementation.”

“We have ensured sustainability through ensuring the school is well resourced and that all staff are trained and supported. We have ensured that all school policies support the program and that staff are aware of their responsibilities in ensuring the success of Accelerated Literacy.” (SEPEB 2012a, p. 66)

The evaluation report identifies a range of key success factors perceived to contribute to the successful implementation of the Accelerated Literacy program. These include:

- the quality and model of training, promoting teacher confidence in implementing accelerated literacy,
- strong school leadership and whole school commitment to literacy improvement, through engagement with accelerated literacy and ongoing support teacher learning,
- flexibility in how funding could be used to meet local needs allowing school-based decisions in response to local priorities and preferences,
- ability to invest in building school capacity: teacher expertise, ICT equipment, texts and learning materials,
- building capacity of teachers, individually and collectively, particularly in relation to willingness to learn new methods of teaching literacy,
- developing leadership skills including developing expertise in interpretation and use of performance data,
- regular monitoring of student progress using quality school-based assessments and SMART data. (SEPEB 2012a, p.76)

The Reading to Learn (R2L) Program

Similar in intent to Accelerated Literacy, the Reading to Learn (often referred to as R2L) program is designed to enable students from all backgrounds to read texts across 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. The intention is to involve all students in common activities, creating a class environment in which all students are continually engaged in reading for pleasure and in successful completion of literacy tasks.

Reading to Learn is described in the program evaluation report (Urbis, 2012c) as promising a self-contained, holistic program for teaching reading and writing that provides teachers with:
- structured teaching sequence centred on a core text
- explicit activities that scaffold student skill development
- assessments embedded in the teaching sequence
- suggested resources that support student engagement in lesson activities.

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 the 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. The program is reported to have:
- 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, and
• extended the diversity of texts that students were engaged in reading both in and out of school.

The evaluation clearly demonstrated that this program worked most effectively when two key ingredients were present:
• a whole school approach that ensured all staff members were familiar with the program and its style of implementation,
• strong leadership and planning to ensure the approach were adopted with fidelity and by the whole school staff.

The evaluation identified that the most successful schools had a principal and/or executive that demonstrated strong commitment to the intervention and drove its implementation as a whole school priority. This leadership provided ongoing and structured support of staff and encouraged sharing of responsibility for successful implementation and improvement in literacy learning. The evaluation report noted that many of the principals engaged in this program understood the importance of broader cultural change in enhancing student outcomes in reading. Obtaining the support of all teaching staff was seen as a key prerequisite for ensuring that the outcomes of Reading to Learn would be achieved. The capacity for schools to engage all teaching staff in professional learning (using the National Partnership funding) was seen to be critical to this process. The shared professional learning provided to teachers was reported to have resulted in increased collaboration, the sharing of resources and professional dialogue. Each of these factors had a positive impact on teacher confidence to try new ideas embedded within the Reading to Learn program.

Despite these benefits, the evaluation reports that the overall impact of the intervention on student learning outcomes, teacher practice and whole school cultural change varied considerably across schools. Greater success was seen to be dependent on the particular leadership approach taken by school executives and a comprehensive professional learning package for teachers. However, the evaluation clearly reported that this professional learning on its own was insufficient to achieve lasting change in pedagogy and beliefs about student learning. The finding of significant variability in the extent to which teachers accepted the foundations for the program and its implications for their own practice speaks of the need for leaders to build high levels of commitment to change and collective responsibility for student learning.

Despite the variability noted above, the evaluation report clearly identified benefits that ensued from the program in terms of teachers’ professional growth. Teachers in schools that had adopted Reading to Learn were said to be:
• more knowledgeable about literacy teaching strategies,
• more reflective and discriminating in all aspects of their teaching,
• more familiar and proficient in developing systematic assessment strategies,
• more prepared to teach explicitly, and to have higher expectations of their students.

The evaluation similarly reports a range of positive outcomes for students (although these observations are qualified elsewhere and not able to be verified from the quantitative analysis conducted including:

• “improved student confidence
• increased capacity to use strategies to promote comprehension
• improved reading and comprehension skills for many Aboriginal students
• demonstrated transfer of literacy skills and strategies into other key learning areas
• extension of the diversity of texts that students were engaged in reading, both in and out of school.” (p29)

The report also cites several other outcomes based on teacher and principal perceptions. These positive comments include:

“Most respondents indicated that Reading to Learn has increased student engagement with reading, improved reading and comprehension skills, and improved student writing…” p2

“Many principals, teachers, students and parents expressed the firm belief that Reading to Learn had contributed very positively to students’ reading achievement…One of the strongest findings was that student engagement with reading is heightened in Reading to Learn classrooms…increased levels of participation, task completion, skill transfer and reading outside school were all strongly described as outcomes…” p64

The importance of shared and consistent understanding of the intentions of the reform in achieving successful outcomes is reflected in observations noted in the evaluation report of considerable variation in interpretation of the goals of the program and its method of implementation.

While acknowledging the applicability of the literacy intervention to differing student groups, the evaluation reports that there is a misalignment between the results of student achievement, based on external measures and the perception of many school stakeholders engaged in the evaluation process. Despite that, the evaluation report provides the following information:

In both data sets, NAPLAN and NPLN assessments, gains in mean reading scores were observed for all student cohorts at Reading to Learn schools.

NPLN assessment data indicates that the gain scores for aboriginal students were similar to those for non-aboriginal students. (SEPEB 2012d, p.25)

Within the evaluation a range of stakeholders within the sample schools, from principals to teachers, students and parents consistently expressed the belief that the intervention had contributed positively to students' reading achievement. There was unanimity among stakeholders that student engagement in reading had certainly improved. It may be
suggested that the development of such a positive attitude to reading may indeed be the pre-requisite to enhance reading outcomes achieved through the Reading to Learn program at a later stage.

The Focus on Reading 3-6 Program

Another literacy based program which is most readily suited to a whole class context is the **Focus on Reading 3-6 program.** This program includes intensive professional learning for teachers to support the explicit teaching of the key aspects of reading in the middle and upper primary years. Its particular focus is on comprehension, vocabulary and reading text fluency. The program draws from a sound research base that justifies the need for these key aspects to be at the forefront of literacy teaching and learning in the middle years of schooling.

The Focus on Reading 3-6 program requires ongoing support and school leadership drive and highlights the importance and use of:

- rich texts, particularly subject-based texts, multi-modal texts and the types of texts that interest and motivate learners in the middle years,
- rich talk of the kind that encourages students to ‘show their thinking’ through talk,
- ‘deliberate’ teaching that begins with insightful assessment;
- planning for explicit instruction based on students’ needs;
- supports and scaffolds for students through modelled, guided and independent teaching;
- clear and purposeful feedback and constant opportunities for student reflection.

Phase 1 of the program focuses on teaching for Comprehension. Phase 2 emphasises Vocabulary knowledge and fluent text reading practices. Phase 3 focuses on consolidating and embedding new teaching and learning practices into school and classroom structures.

In particular, the program has helped schools by enabling:

- greater clarity about the 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,
- everyday use of the teaching strategies across the KLAs.

The evaluation report indicates that the intervention is most successful when there is a whole school commitment towards:

- ensuring that the reading ability of students in the school is enhanced,
- preparation of all staff members to engage in extensive professional development and collaborative planning. These processes are designed to enhance pedagogy relating to teaching reading, including the preparation of tailored resources to assist students with their reading.
This program identifies significant changes in classroom pedagogy and an increased understanding by teachers about how to teach reading. This was particularly the case in relation to an enhanced knowledge and understanding of reading pedagogy and the skills to undertake these tasks.

The program particularly offered teachers the opportunity to enhance their ability to engage in explicit teaching according to identified student needs, including the use of differentiation to target student learning.

Although the evaluation found positive impacts on students, at this stage, the greater impact appears to be on teacher ability.

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. (Urbis 2012a, page v)

Schools reported a range of changed student behaviours that suggest enhanced student engagement, a key prerequisite to increased student learning outcomes in the longer term. Some examples of changed student behaviour are included below:

- the volume, variety and complexity of texts read by students,
- students’ ability to read for meaning,
- students’ confidence in, and enthusiasm for reading,
- students’ 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.

The applicability of the Focus on Reading program across a range of student groups is summarised in findings reported by the evaluation:

- nine out of ten respondents indicated that the program had been very effective or somewhat effective for all students (94%).
- a high proportion of respondents also indicated that Focus on Reading 3-6 was effective for students below NAPLAN benchmarks (82%) and students above NAPLAN benchmarks (81%).
- most (70%) of respondents reported the program was effective for students with a learning disability. However 10% were of the view that Focus on Reading 3-6 was not very effective for this student group.
- fewer reported that the program was very or somewhat effective for ESL/LBOTE students (64%) and for Aboriginal students (51%). (Urbis 2012a, p.33)
The program evaluation identifies the following success factors in relation to school level outcomes from the Focus on Reading implementation (Urbis 2012a, p.43):

- **Strong leadership** - Strong leadership is critical when dealing with staff cynicism or resistance. Integral to the program’s success is having all Y3-Y6 teachers ‘on board’, talking the same language, using the strategies and teaching student to read based on this evidence-based approach.

- **A good-working environment with open and dialogue and constructive feedback** - A supportive and collegiate environment, fostered by the leadership team and Program Facilitator is essential. Part of their role is to encourage staff to share what works well and facilitate discussion in ‘non-Focus on Reading’ time such as at regular staff meetings. The classroom modelling and demonstration leads to greater knowledge and information-sharing. A supportive environment means that staff are more open to discussing their achievements, as well as their challenges and areas for improvement.

- **Inclusion of all staff in training** - Ensures that movement of staff across the grades will enable the program to continue. To continue the program effectively, teachers will need to ensure they continue professional dialogue and professional development.

- **Catering for students of all abilities** - Focus on Reading is considered to be suitable for all students, even those that are performing below expectations. The program allows students’ with learning difficulties to still be included in the whole-of-class activities and actively participate, even if they may need extra support.

- **Ability to purchase resources** - Schools employed NPLN funding to purchase new texts and reading resources for students which were used during guided reading sessions.

**The MULTILIT Program**

MULTILIT is an intervention program that is structured to work effectively with “low progress” readers. MULTILIT is most commonly employed as an intensive one-on-one tutoring program for readers experiencing literacy difficulties in Years 2 to 6. However it should be acknowledged that it can also be used in small group learning settings. The program is explicit and directive in nature. The program leverages off best practice and current research in reading and addresses each of the five areas of reading instruction: phonemic awareness, phonics, fluency, comprehension and vocabulary.

According to the results published in the evaluation report by Urbis Pty Ltd, on behalf of the NSW Department of Education and Communities, MULTILIT would appear to work best when:

- provision can be made for intensive one on one instruction,
- the approach is clear, explicit and prescriptive (despite the extensive variations in the current program evaluation reports),
• students are effectively engaged,
• the MULTILIT tutor has been well trained to understand the philosophy of MULTILIT,
• there is a close link between the classroom literacy program and individualised interventions,
• the reading program integrates with such areas as spelling, comprehension and writing,
• there is an ongoing budget for teacher professional learning and casual relief.

Furthermore the evaluation of the intervention clearly demonstrates that the preferred approach for MULTILIT is both highly structured and explicit in its delivery and presentation. Despite reported “variations on a theme”, many students not only demonstrated reading gains but also increased confidence, reading enjoyment and attitudes to reading and schoolwork generally.

The evaluation report indicated that in relation to 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.

Indeed the report makes the following claim in relation to the overall impact of the MULTILIT intervention:

The majority of survey respondents and staff consulted in the qualitative research believed that MULTILIT had overall been an effective program for improving literacy. Improvements were observed mainly 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 is 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. Parents/carers of Aboriginal children also observed improvements in their children’s reading. In terms of the applicability of the impact
of the intervention with students of different demographic characteristics, the reading gains in NAPLAN and NPLN Assessments for Aboriginal students were in line with those for non-Aboriginal students. (Urbis 2012b, p.27)

Whilst generally favourable results for students were reported, the achievement data did not indicate significant gains in literacy at the state level. Despite this, many examples were provided by teachers of students where test scores and reading levels had improved quite significantly.

It should be noted that the overall program methodology is highly prescriptive in its approach and not all schools were reported to have implemented the program as recommended. Suggesting that one of the possible limitations of the intervention program is its reliance on intensive training of tutors to be able to conduct the one-on-one sessions. In some schools these tutors have been volunteer parents who have chosen to assist the school in some way.

Several critical success factors were identified including:

- 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.

Each of these factors indicates the challenges of replicating this intervention in a variety of learning contexts.

The evaluation has cited the challenge in some schools of ensuring the implementation of appropriate follow-up strategies for students returning from one-on-one withdrawal intensive instructional sessions. The evaluation report cited several examples where no provision had been made to ensure a smooth transition for such students. It was also seen as important that classroom teaching is consistent with what is occurring in individualised interventions. In fact the evaluation report suggested that whole classes and whole schools could benefit from an understanding of the approaches used in MULTILIT, and that training for classroom teachers was an important step in this process. One participant in the evaluation is reported to have made the following comment to address this issue:

\[
\text{There needs to be a plan or program to all those students who get off the MULTILIT program, there is nothing to support students once they are in the class and sometimes students don't make a link to what they have learnt in MULTILIT and how they can use it in the class room.}
\]

In summary, this intervention is best suited to a one-on-one withdrawal context and not a whole class intervention for students with reading difficulties. It appears to be most successful where a whole school commitment to the withdrawal approach does exist, so
that ongoing in-class support can be provided to these students on their return. Long-term sustainability of the intervention program may be limited by the suitability of the program for some students e.g. students with a learning disability, older ‘too cool’ students, and failure to implement the program as intended.

Finally the longer term retention of this intervention in schools will depend strongly upon ongoing funding to employ more tutors more often and purchase more resources. In these circumstances the intervention would need to compete with other possible literacy interventions to demonstrate its overall superiority because of its projected ongoing cost.

**The QuickSmart suite of programs**

The QuickSmart suite of programs was developed by the University of New England to address both literacy and numeracy needs of middle years’ students (years 5 to 8). Within the National Partnership program under consideration only the numeracy component was offered to schools. QuickSmart may be described as a basic skills intervention that is designed for students who demonstrate persistently low achievement. The intervention program aims to improve students’ ability to easily and quickly recall number facts and perform basic computational skills, referred to as ‘automaticity’.

This intervention program is research based and supported, resourced and built around a professional learning program for key stakeholders in schools, in particular, principals, supervising teachers, teachers and teachers’ aides. The program is built around the notion of deliberate practice and strategy instruction in basic mathematics.

As a ‘second chance’ program for students, this initiative is designed to particularly assist those students in the bottom 30 per cent of performance levels over a 30 week period focusing on quick recall of number facts and performance of basic computation skills. It is particularly designed to start with students at their current level to ensure that they don’t lose face and then to work intensively in a withdrawal on a one-to-one situation to enhance numeracy skills.

Peer modelling is seen to be a key aspect for learning growth by students who would be suited to learning styles characterised by systematic lockstep approaches. The program teaches the key values of persistence, risk taking and the social skills of empathy among students and therefore has transferability as a new pedagogy across a range of key learning areas. The program can be used with any group of students from kindergarten to adult. This intervention works most effectively when it includes all six of the key components of the integrated package.

The program, described by its author as more of a “pedagogy program” than a numeracy intervention, has produced similar rates of growth for both indigenous and non-indigenous students. These outcomes are more strongly supported by teachers, parents and students’ impressions of effective learning than by broad scale testing measures.

The program is built around a systematic lockstep approach which must be followed. The key role of the teacher is to define each child’s starting point and then through cognition
and appropriate schemas link key learning principles to guide students’ learning in key numeracy concepts.

QuickSmart is not necessarily structured to become a whole school initiative. Consequently the introduction of QuickSmart appears to have had minimal impact on overall school culture. Nevertheless, some key impacts identified by principals included:

- strengthening the relationships between the school and key members of the school community,
- improved attitudes to mathematics among students,
- reflection by teachers on the potential benefits of using the QuickSmart strategies with students in whole class numeracy lessons.

Despite these advantages, the evaluation reported some limitations of the efficient and effective implementation of the intervention. Both principals and teaching staff consistently indicated that QuickSmart can only be effectively implemented with the ongoing support of a qualified program coordinator. Despite the required intensive training of teachers to ensure its effective implementation, the evaluation cites one example of a deputy principal who commented that the tutors do not have the background to independently manage the educational aspects of the program:

“It is not possible to expect parents (tutors) even with the training, to run the program and get all of that organise, and understood understand how to put groups of children together etc.” (SEPEB 2012c, p.43)

While the program is not intended to be a vehicle for whole school cultural change, the evaluation has cited that parent involvement in children’s education has clearly increased as a result of the children being engaged in the QuickSmart intervention, with many parents indicating their desire for the program to continue, while seeking an ongoing role in its involvement for their own children.

In the context of limited resources, even with National Partnership funding, the evaluation did identify the difficult choices that some schools made in targeting particular students. Several schools participating in the evaluation reported that the need was much greater than the resources would allow. One teacher reported that:

“I’ve got a lot of children in stage three, years five and six, who still can’t do times table or can’t remember that, or haven’t learnt them. So I think it is important they have those strategies and I think by implementing the program in classes and everyone gets a fair go at it.” (SEPEB 2012c, p. 48)

The intervention may only lend itself to those learning contexts where resources are available to ensure that as many children as possible can be exposed to the opportunity for addressing their learning needs and where tutors and teachers can be trained in the delivery of the program.
Interestingly, the applicability of the QuickSmart methodology has now expanded into a range of adult learning contexts, e.g., New South Wales Prisons, where at least a short-term impact on adult numeracy and literacy levels has been demonstrated.

The intervention has also been instrumental in building school capacity. Several examples are provided where teachers have applied problem-solving strategies learnt and developed within the QuickSmart intervention program across a wide range of key learning areas. The ability of an intervention program to add value to teachers’ classroom repertoire is seen as a significant advantage for educational practitioners. The evaluation of this particular intervention also identifies the importance of ensuring that teachers facilitate nurturing students’ numeracy development when they are returning to the classroom from a withdrawal setting.

The ongoing commitment to QuickSmart of both the school leadership team and classroom practitioners will facilitate longer term improvement of learning outcomes for students. To achieve this outcome, four key factors have been identified from the evaluation:

- securing a funding source that ensures the ongoing employment of tutors participating in the program,
- providing ongoing relief time to support the QuickSmart co-ordinator to ensure that the leadership of complex management tasks is both effective and efficient,
- ongoing provision of resource kits to ensure that appropriate material is available at all times for teachers and students,
- making suitable arrangements to ensure that the strategy is always in place for ongoing training of new teachers or tutors, should this be necessary.

**Taking Off With Numeracy (TOWN) program**

As described earlier, *Taking Off With Numeracy (TOWN)* was developed by the NSW DEC 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. The program can be employed both in a whole class setting and an individual case management basis.

The major focus of this initiative was to improve student learning outcomes by enhancing the skills of teachers in relation to two key tasks: the identification of students’ numeracy needs and the development of specific teaching programs to address those needs. Some evidence of enhanced student progress in numeracy was provided through the evaluation, particularly in those settings where schools were prepared to adopt a whole school approach, actively engage in professional development and develop lesson plans and related resources.
In contrast, the evaluation highlighted the fact that some teachers were looking for more than what TOWN provided. Unlike other programs involved in this evaluation, TOWN has been described as a “process” or a “catalyst” for a changed approach to numeracy teaching, rather than a “program” as such. During the evaluation process, the program was criticised on the basis that:

”... there wasn’t enough to it, that it was too thin and high level, and did not provide enough value for money”. (URBIS 2012d, p. 5)

It would appear that there had been a misunderstanding by at least some teachers about the overall purpose of the program. Many staff considered that TOWN would be a complete resource package, whereas according to DEC TOWN staff, the primary focus of the program was always on its being a professional development and learning program.

While the qualitative and quantitative research clearly demonstrated that TOWN had a positive impact on schools and delivered numeracy outcomes for teachers and students, some questions remain about the overall improvement by students engaged in this intervention.

In the first instance the evaluation report proposes that “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)” (URBIS 2012d, p. 3). Furthermore, the evaluation report highlights that the evidence in terms of student impact “is more mixed and equivocal” (URBIS 2012d, p.3).

In identifying the overall impact of the TOWN intervention on students, three key data sources were employed. These included NAPLAN and NPLN assessment data supplied by NSW DEC, on-line survey data and qualitative data collected during school visits. Results from the on-line survey and related qualitative data highlight the fact that teachers in particular considered that TOWN had improved the numeracy skills of their students in participating TOWN schools. In contrast however, the NAPLAN and NPLN data are more equivocal on this issue. The evaluation reported that:

“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”. (URBIS 2012d, p. 3)

It appears that schools did not fully understand the notion of the TOWN program and therefore did not properly implement some key aspects of the program, challenging its integrity. In contrast, some teachers chose to use some aspects of the program and not others, challenging the fidelity of implementation and making it difficult to draw any conclusions about the singular impact of the TOWN program on individual students.
Despite the limitations of the results achieved and the accompanying methodological issues, a number of factors that had enhanced student learning outcomes in schools using TOWN were identified including:

- further pre-planning, preparation and testing of the program prior to launching in schools,
- providing an easy on-line 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,
- investigating further strategies to allow for more face-to-face and hands on support to schools to implement the program,
- considering 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.

**Mindful Learning Mindful Teaching (MLMT) Program**

*Mindful Learning Mindful Teaching (MLMT)* is neither a whole school intervention program nor a targeted approach for individual students. On the contrary, MLMT is an approach that is designed to facilitate reading comprehension for students by building teacher capacity. MLMT is centred on an inquiry cycle which involves identifying:

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

Schools identified that a major advantage of the MTML approach was the flexibility to adapt teaching and learning to student needs and learning contexts to facilitate their reading comprehension. This has resulted in:

- greater enthusiasm for and confidence in reading,
- enhanced understanding of reading comprehension strategies and how to use these to enhance skills greater willingness to discuss what has been read.

The strength of this program is that it closely aligns student learning need with teacher strategy, irrespective of school circumstance, underpinned by:

- use of student data as the foundation for teacher planning,
- explicit teaching of students’ reading comprehension strategies,
• the acquisition only of texts that actively engage students.

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

During the evaluation, many members of staff reported satisfaction with the nature of leadership provided by the senior executive team in the school. This was demonstrated by the way they identified the needs of teachers and students and assisted staff in developing targeted strategies to effectively respond to those needs.

Ongoing teacher support was provided by the CEO and this also facilitated overall implementation and quality of outcomes. Many teachers indicated that the experience had impacted positively on their literacy teaching practice, enhancing their confidence and their capacity to improve the reading comprehension ability of the students. Their learnings from the professional learning experiences were embedded in the classroom and many teachers consider that these will be sustained into the longer term.

These results indicate that this approach does have the potential to be applied in a range of different learning contexts. Among the many findings identified for students in relation to the evaluation undertaken by URBIS, the following findings quoted from the report are particularly pertinent:

• 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 on-line 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. (URBIS 2012c, p. 28)
Students also indicated that they enjoyed reading and considered that the literacy block undertaken each day was a favourite part of their learning for the school day. Some students identified that they actually understood more about reading now and were able to access far more interesting books. Some students were able to explain the nature of the reading comprehension strategy they had learnt and were employing in class.

The evaluation also indicated that parents were able to provide examples of where children were using a range of comprehension strategies at home to develop and demonstrate a deeper understanding of the material they were reading. Some parents detected an increased enthusiasm by their children for reading.

The flexibility of the program has been tagged as a key reason for its ongoing success, with wider implications for different learning contexts, if the following success factors are met:

- a strong leadership team,
- funding to allow for professional learning and the purchase of new and varied texts,
- a strong school focus on reading comprehension,
- willingness by teachers to adopt a new approach to teaching reading comprehension,
- a ‘whole of school’ approach and use of common language,
- 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.

In summary, the success of the program in different school settings would require committed leadership and targeted and ongoing support of teachers in classrooms.

Individual Learning Plan (ILP)

The application of an Individual Learning Plan (ILP) for selected students represents the eighth program that was reviewed as part of the overall strategic evaluations. For the purposes of the review the individual learning plan has been referred to as a program. The reality is that it is not a program but a planning tool, employed by teachers to focus students learning sharply in accordance with their diagnosed learning need. As such, the Individual Learning Plan provides targeted intervention, focusing on the student’s individual strengths and areas for development to raise the achievement of identified at risk students. Its use can be effective both with individually targeted students but also in small group learning settings. The development of an ILP may be indicated for students experiencing difficulties in
reading or numeracy as a result of a language background other than English, a learning difficulty, limited opportunities in schooling, or living with a disability.

In assisting the students, teachers employing the ILP have a responsibility to plan, monitor, manage and evaluate student achievement to identify specific learning needs and appropriate teaching and learning intervention strategies that are documented within the ILP. Ongoing monitoring of student progress provides data to track student learning and then inform future decision-making regarding appropriate content identified learning strategies employed, allocation of time for instruction and practice and the environment in which the intervention is conducted most effectively.

Seven schools were involved in the evaluation of the ILP. At a general level, the impact reported was positive:

“There was a consistent view across all schools that ILP’s have improved reading outcomes for all or most students. Very few respondents said that no students improved. In the majority of schools, ILP’s were not the sole literacy intervention.”

(SEPEB 2012b, p. 2)

However, the evaluation also acknowledges that the use of the ILP cannot be seen as the sole contributor to improved performance in literacy by students engaged in the evaluation. Nevertheless the implication for the applicability of ILP’s across a range of learning contexts is clear and positive.

The evaluation identified that the ILP’s were developed in a range of ways due to the unique needs of students in particular school contexts. The most obvious variations were evident in the following three areas:

- the model for providing targeted activities for identified students
- the selection, qualification and management of tutors or personnel working with individual students
- the provision of training to tutors and others involved in the implementation of ILP’s

As with other interventions, the applicability of this tool across a range of contexts appears dependent on the selection of appropriate personnel. In addition, it is apparent that the selection process needs to be followed up by targeted training and support, to ensure quality provision and use of the ILP with selected students.

Among the schools involved in the evaluation there was overwhelming support for the introduction of Individual Learning Plans along complemented by whole-class intervention strategies. Evaluation of this intervention clearly demonstrates that the ILP has had considerable success in schools by improving students reading skills, enhancing student participation, engagement and general confidence in relation to learning. Both NAPLAN and NPLN assessments indicate a general improvement in the scores of students who were involved in the use of Individual Learning Plans. However it cannot be concluded that any improvement is a direct result of this intervention.
The emphasis on individualised learning and the accompanying implications for differentiated teaching appears to have strengthened teacher capacity. Additionally, teachers are analysing data on an individual student needs basis for selecting appropriate teaching and learning strategies. Finally, parent and community involvement has been enhanced due to increased school communication and engagement of parents in the development of the ILP's.

Summary

In summary, it would appear that each of the eight interventions has claimed to have had an impact on student improvement in learning outcomes. However some interventions lend themselves more readily to generalisability across a range of learning contexts.

At least four key factors appear to be pivotal in any learning context where there is potential for the intervention to have some success: inspirational leadership that builds staff, and in some cases school community, commitment to the intervention, a whole school commitment that ensures that teachers work together towards a common goal, ongoing support and professional learning opportunities when new skills and understandings are necessary and the need for ongoing funding to ensure that adequate resources and ongoing training of new staff can be built into the ongoing culture of the school.
4.2 What factors have hindered significant improvement in student outcomes, and to what extent have they been/could they be addressed?

The key desired outcome of each of the eight intervention programs is the long-term sustainable improvement of students’ literacy or numeracy learning outcomes.

The previous section highlights the importance of a whole school approach as a pre-requisite for ongoing success for students. For effective program implementation, a significant challenge for the vast majority of the schools, relates to the need for ongoing program funding for consumable resources and training of new and ongoing staff.

Many schools acknowledge the benefits that they have received through their participation in the NPLN. However, according to the evaluation reports, many schools see the search for continued funding as an enduring challenge.

The evaluation reports cite a range of examples of a strong reliance on funding particularly in relation to accessing ongoing training or provision of specially trained tutors to undertake a program with students. For example in the case of the Accelerated Literacy intervention, many schools involved in the evaluation invested significant funds into the program and feel the need to maximise the benefit of their expenditure. Issues around the future availability of Accelerated Literacy facilitators or trainers, especially as new staff are appointed to the school, continue to pre-occupy some of these schools without any real resolution. It is clear that the approach adopted in some schools and inherent in some programs (e.g. TOWN) is unduly dependent on continued external support.

Similarly, access to funding has been a significant issue for those schools involved in the Multilit intervention program. The most commonly suggested improvement from the evaluations was to extend funding to allow more children to participate, employ more tutors more often, purchase more resources and implement the program more fully as was intended:

“Funding of course dictates who receives the support - it would be great to offer it to all who need it.”

In a similar way, the evaluation of Focus on Reading also highlighted the challenge of ensuring the availability of a certified Trainer to assist staff with ongoing professional development needs, facilitating a pivotal link to classroom practice. As the facilitator could demonstrate a range of strategies and routines for colleagues relating to the intervention, there was then an increased possibility of sustaining commitment beyond the initial training period. If teachers see the facilitator demonstrating how something operates in the classroom environment, this reinforces the operating principles. Without the facilitator to demonstrate good practice, the real impact of the intervention may be limited.

With the QuickSmart program, the role of the tutor is also pivotal to the long-term success of the program and its impact on student learning outcomes:

“The employment of tutors is the critical factor in the determination of sustainability for schools.”
The willingness and capacity of schools to find ways to continue employment of tutors in QuickSmart will be fundamental to its ongoing implementation in schools. Perceived cost effectiveness was a key driving factor for the continuity of the program. Schools generally agreed that this intervention was an expensive program to implement and to sustain. The costs associated with the training and employment of tutors may prevent some schools from continuing this intervention as an individual approach for students. Some schools are looking at ways to adapt the program to build on their investment in QuickSmart.

The vast majority of teachers involved in the evaluations were generally satisfied with the quality of training and support provided, regardless of the program considered. One exception was in relation to the Accelerated Literacy program, where some teachers suffered the challenge of not understanding the distinctive interpretation of the scaffolding as it relates to this program. Most teachers involved in the evaluation agreed that the “scaffolding approach” took both time and commitment. In at least two evaluation reports, issues were raised about the suitability of the programs and their inherent teaching/learning methodology for children with specific learning needs. In the Reading to Learn program, the evaluation highlighted the particular challenges of employing an intervention with students in different age or stage groups, students at different levels of literacy achievement and to a lesser extent, students with English as a second language. For example several teachers of Kindergarten stated that it was difficult to apply the sequence and detailed reading strategies as the students did not have the necessary reading skills that were expected.

Several teachers found it difficult to cater for the needs of students, where they had a wide range of ages in their class for example teachers who had responsibility for composite classes or in small schools in rural areas quite where students from Years 3 to 6 are often in one classroom setting or where students at greatly varied reading levels were within the one classroom. Consequently, these students may not have benefited from the intervention as much as teachers had desired. Teachers found it difficult to ensure that the weaker students were succeeding while simultaneously challenging the more advanced students. In a similar way some teachers were highly challenged in introducing the intervention to students who were identified as having English as a second language because of the lack of available English that could be drawn upon to refine their reading skills through this intervention.

The evaluation of MULTILIT highlighted that just under half of all respondents indicated that there were students for whom MULTILIT was not a suitable literacy intervention including students with:

- learning difficulties/ well below benchmark literacy standards,
- behaviour/ emotional issues/ problems with concentration,
- a short attention span and those that can’t deal with repetitive lessons,
- slow reading/processing capacity – problems with speed required for fluency,
- discomfort with one-to-one tuition and being withdrawn from class,
- poor/inconsistent attendance at school,
- speech issues/blending of sounds – problems with articulation required for fluency,
- non-English speaking backgrounds/ESL,
- poor vocabulary and comprehension.

Given the broad range of students for whom the program is not applicable, it would appear that MULTILIT would need serious review to ensure its broad relevance.

One common criticism of the MULTILIT intervention is the reported poor liaison between the teacher responsible for whole class reading instruction and the teacher undertaking activities in the withdrawal setting. In these situations it has sometimes been reported that there is little follow-up in the conventional classroom for those students returning from one-on-one instruction.

The Tables below summarise the range of factors identified through the evaluations that specifically impact on student improvement. Whilst in some cases steps had been undertaken to address these issues, in other cases there is no evidence of any action to address identified issues.

**Table 1:** Factors inhibiting significant improvement in student learning outcomes using *Reading to Learn* (whole school approach to intervention)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Strategies to address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult to make judgements due to the reported mismatch of perceived student outcomes between external test measures and internal assessments by various members of the local school community. While NAPLAN results highlighted minimal student improvement, internal assessments from Principals and teachers were much more positive.</td>
<td>Ongoing assessment using in-class and external measures to identify genuine learning progress.</td>
</tr>
<tr>
<td>Data clearly demonstrated that the overall impact of the program was directly related to the school leadership commitment and the accompanying whole school planning, or lack of it.</td>
<td>Provision of high quality professional learning opportunities to ensure that leaders are well prepared to lead the implementation of the intervention.</td>
</tr>
<tr>
<td>A highly structured approach to programming and teaching, including a mandatory 90 minutes lesson per day. This produced a lack of commitment by some teachers to the methodology being employed because of the time required.</td>
<td>Consider possible approaches to adapting the program to become more flexible while maintaining its integrity.</td>
</tr>
</tbody>
</table>
Table 2: Factors inhibiting significant improvement in student learning outcomes using *Accelerated Literacy* (whole school approach to intervention)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Strategies to address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different trainers for different modules produced variable key learning outcomes for teachers.</td>
<td>Provide one trainer who undertakes teaching of all modules to ensure consistent approach to training.</td>
</tr>
<tr>
<td>Variability in support for implementation of the intervention from region to region.</td>
<td>Requires central coordination to ensure that regions are providing similar levels of support.</td>
</tr>
<tr>
<td>Limited support by parents towards the program.</td>
<td>Proactive strategies to be developed at the local school level to ensure that parents remain well informed and can assist their children.</td>
</tr>
</tbody>
</table>

Table 3: Factors inhibiting significant improvement in student learning outcomes using *MULTILIT* (most commonly one on one or small groups)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Strategies to address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for more children beginning school to participate in one on one activities. This has direct implications for funding.</td>
<td>Reorganise priorities at the local school level in order to source appropriate funding.</td>
</tr>
<tr>
<td>Make provision for resource booklets to become more readily available for more students.</td>
<td>Permit the photocopying of original documentation.</td>
</tr>
<tr>
<td>The intervention currently does not work as effectively with children who have specific learning difficulties.</td>
<td>Restructure the intervention to enable children with varied learning needs to be included in the program. Alternatively, only target student to meet the intention of the program</td>
</tr>
</tbody>
</table>

Table 4: Factors inhibiting significant improvement in student learning outcomes using *Focus on Reading* (whole school approach to intervention)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Strategies to address</th>
</tr>
</thead>
<tbody>
<tr>
<td>The amount of time required outside the classroom to undertake training and planning is excessive.</td>
<td>Provide opportunities for teachers to undertake modules in their own time on-line or bring the training to the local school community and operate on a cluster basis.</td>
</tr>
<tr>
<td>Current focus on the program is years 3 to 6, whereas many schools considered that this could be a whole school initiative.</td>
<td>Consider restructuring program intervention to facilitate the opportunity for a whole school focus to the intervention.</td>
</tr>
<tr>
<td>Greater engagement with parents would</td>
<td>School to be proactive in developing parent</td>
</tr>
</tbody>
</table>
facilitate student follow-up at home through parent support.  

information evenings and other communication protocols to ensure that parents are well informed about the nature of the program and its benefit for their children.

The need to provide a total of 16 days for training and preparation for participation in the program has dampened the enthusiasm of some staff.  

Where the budget allowance, provision of casual relief for training and stage based planning would be a useful solution.

### Table 5: Factors inhibiting significant improvement in student learning outcomes using **QuickSmart** (most commonly one on one or small groups)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Strategies to address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant logistical difficulties and cost implications in implementing Quicksmart and TOWN simultaneously</td>
<td>Examine the possibility of streamlining organisational arrangements, including training to ensure that teachers receive tailored support to facilitate implementation of both interventions simultaneously.</td>
</tr>
<tr>
<td>Being a withdrawal program, there is little evidence of changed teacher practices in classrooms.</td>
<td>Opportunities to be provided for showcasing pedagogy and team teaching to practice new methodologies in whole classroom settings.</td>
</tr>
<tr>
<td>The 30 week duration of the program makes it difficult to identify the most appropriate students.</td>
<td>Use as many different sources of assessment data as possible to ensure that the most appropriate students are selected for an extended period of withdrawal sessions.</td>
</tr>
</tbody>
</table>

### Table 6: Factors inhibiting significant improvement in student learning outcomes using **TOWN** (applicable to whole school or small group/individual approaches)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Strategies to address</th>
</tr>
</thead>
<tbody>
<tr>
<td>A misunderstanding by many schools about the nature of the TOWN program.</td>
<td>Provision of information packs for teachers being trained to ensure that they thoroughly understand the nature and purpose of the initiative and their role in its implementation.</td>
</tr>
<tr>
<td>A perception that there was not enough provided with the program.</td>
<td>Need to clarify in training that this is more an “approach” rather than intervention program.</td>
</tr>
<tr>
<td>Some schools lacking the considerable skills, resources and motivation required to successfully implement the program.</td>
<td>Provision of additional budget from within school resources to ensure that the intervention is appropriately funded and implementation is</td>
</tr>
</tbody>
</table>
A program cost which was not perceived as providing value for money. Review the overall purpose of the program in terms of what it offers for the costs involved and adapt accordingly.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Strategies to address</th>
</tr>
</thead>
<tbody>
<tr>
<td>The intervention program is currently offered for Years 3 to 6. Many teachers believe that it should be extended from Kindergarten to Year 2 also.</td>
<td>Review overall program logic and structure and reshape program if this is appropriate to extend to younger years.</td>
</tr>
<tr>
<td>Some teachers are devoid of ideas for implementation using the intervention at present, even though principals have the opportunity for networking.</td>
<td>Provide networking opportunities for teachers to enable the sharing of ideas, achievements and successes.</td>
</tr>
</tbody>
</table>

**Table 7:** Factors inhibiting significant improvement in student learning outcomes using Mindful Teaching/ Mindful Learning (MTML) (neither a whole school intervention program nor a targeted approach but a tool or process to be employed by teachers)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Strategies to address</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILPs are seen to be very labour intensive because of their highly tailored approach.</td>
<td>Provision of templates and the opportunity to work in teams may minimise the work load to some extent.</td>
</tr>
<tr>
<td>Provision of expert tutors and other support people to work one-on-one with students presents the greatest barrier to maintaining practices in each school.</td>
<td>ILPs should be integrated into existing classroom practice to minimise workload or teachers.</td>
</tr>
<tr>
<td>Potential danger that ILP will be lost with teacher turnover.</td>
<td>Need for leadership and whole school commitment to ensure ongoing continuity and use of ILPs to drive student learning.</td>
</tr>
</tbody>
</table>
4.3 To what extent has each program resulted in significant ongoing improvements in teacher confidence and capacity to teach core literacy and core numeracy skills?

An analysis of the major findings within the evaluation reports relating to the impact on teachers points to some very clear trends. Each of the program evaluation reports claim to have identified a positive impact on teachers. These findings replicate those observed in Phase One of the strategic evaluation (Erebus International 2012).

At the most general level, teachers indicated that the professional learning opportunities provided as part of the program they had been involved in had challenged many of the traditional teaching paradigms under which they had operated. Their participation had caused them to rethink the way they conduct their teaching, use of group work, use of differentiated strategies, and monitoring of student progress. Other teachers reported that involvement in the particular program had confirmed their pedagogy and given them increased confidence to believe that what they are doing can make a difference in student literacy and/or numeracy learning.

The program evaluation reports suggest that schools have largely implemented the programs with a high degree of fidelity. The exception to these situations has been where some teachers, for example in relation to Accelerated Literacy, perceived the workload to be excessive in terms of the return it could provide for enhanced student learning outcomes. In these situations teachers took some “short cuts”, thereby challenging the integrity of the program. While it was not stated directly in the evaluation reports, it could be concluded that such teachers either saw nothing new in the opportunity or were not really interested in implementing the program at an individual level. It should be noted that this is not a flaw in the program per se but demonstrates the necessity for leaders to ensure commitment from all staff, noted above.

It was far more common in the evaluation reports for the vast majority of teachers to consistently describe the opportunity that professional learning and participation have given them to build their capacity including specific strategies for teaching literacy and/or numeracy and their general pedagogy.

For example, teachers who participated in the evaluation of Mindful Learning Mindful Teaching (MLMT) reported that the increased knowledge and confidence that they had built through their participation has been translated into significant changes in classroom teaching practice and that they 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 (eg 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. (URBIS 2012c, page v)

In relation to Focus on Reading, teachers were able to identify a very positive impact and “… a dramatic change in pedagogy and increased understanding of how to teach reading”. (URBIS 2012c, p. 16)

The evaluation reported that the greatest impact had occurred in relation to deepening understanding of comprehension strategies, links to comprehension and vocabulary knowledge and text reading. Teachers were able to embed this learning within their own classroom practice, enhancing both their competence and their confidence. Whilst these findings were qualitative, key benefits for teachers also included improved teacher use of data in monitoring progress and planning programs.

The QuickSmart evaluation was not as positive as others on its impact on teachers, perhaps as teacher capacity building was not one of its primary objectives. Despite this, the evaluation reported that some teachers were seeking to transfer the skills that they had developed in assisting students in a withdrawal scenario into the full classroom setting in relation to teaching and understanding numeracy and in particular the concept of “automaticity”.

The evaluation did report that “a few teachers” were:

better able to recognise which particular students needed assistance,

better able to use the times tables slides occasionally,

better equipped to prompt students to think of and use the QuickSmart strategies they had learnt in tutoring,

more confident about discussing strategies employed through QuickSmart with the whole class and

able to use the problem-solving strategies learnt in QuickSmart with all students in the classroom.

While not dramatic increases in teacher confidence and competence, these findings do highlight the ability and willingness of motivated teachers to apply new learning insights about teaching pedagogy in other learning settings.

The Reading to Learn program was more direct about the benefits for teachers in both building of confidence and capacity. These benefits included the capacity for teachers to:

be more reflective about their own practice across all the teaching,

be more discriminating in selecting topics and resources to address student interest and needs,
• have increased ability to develop well-structured lessons, using more explicit teaching strategies,
• feel better prepared to assist students.

Finally, in relation to the evaluation of Individual Learning Plans, the evaluation did report some scepticism and anxiety among teachers about the time-consuming nature of developing the plans and the additional workload that it imposes on them. However, after implementing the ILP’s, many teachers saw the advantage these plans offered in terms of better focusing students’ learning.

Indeed teachers generally reported that their teaching and learning activities had become more streamlined and more purposeful to meet the individual needs of students rather than having a “one size fits all lesson”. One teacher was reported to have described the situation in the following way:

_We used to teach to the middle of the class, now we know each student as an individual, you can no longer just “teach a lesson”. (SEPEB 2012b, p. 44)_

In summary, the findings relating to the impact of the programs on teacher confidence and competence are generally very positive. While it is still relatively early in the implementation process, it is encouraging that several evaluations reported the opportunity that teachers had taken to apply new insights, understandings and skills into a range of other teaching areas and classroom contexts. This not only reflects on the value of large scale teacher professional learning to achieve enhanced personal confidence and competence but also as a key element of successful reform initiatives.

### 4.4 Have schools developed or changed their practice in identifying, monitoring and tracking students who are selected for these literacy and numeracy programs?

The research on cultural change in schools clearly highlights that with strong school leadership and adequate teacher support, it would normally take approximately 5 to 7 years to ensure that new practices are fully embedded within the school's routines and operations. In contrast, these programs had been running for only a short time prior to the evaluations being undertaken.

Nevertheless, the evaluation reports identified the increased and more systematic use of student data as the foundation for making informed decisions about student progress and teacher planning for pedagogy. For example, the QuickSmart evaluation reports highlights one of the key advantages of a whole school approach as being the adoption of a culture of gathering and analysing student data for monitoring and tracking student progress.

Similarly, the evaluation of Accelerated Literacy also highlights the trend towards an overall collective responsibility for gathering and tracking student data. The report notes:

_“Teachers consistently reported that they felt a greater sense of responsibility for whole school planning and student outcomes, but this was not just a job of specific_
classroom teacher. An examination of student performance data became a focus of the whole school, teachers reported that they felt part of the decision-making processes that determine the school priorities.” (SEPEB 2012a, p. 65)

Similar findings were also identified in the report of the Focus on Reading 3-6 evaluation, in which it is noted that there are emerging signs of genuine cultural change in the way that teachers go about the business of planning teaching and learning:

“Several of the schools spoke very favourably about the use of the learning continuums. Some had initial reservations, primarily because they were unsure about how to plot students. One Certified Trainer commented that ‘It initially took time to get your ahead around them’. However, overall, teachers were appreciative of how the continuum allowed them to track students’ needs, growth and performance over a period of time and some said that this had now become a regular subject of discussion in staff meetings.” (URBIS 2012a, p. 40)

The evaluation reports also clearly identify that a growing number of schools are making enhanced use of in-school data as well as external student information, for example, NAPLAN results, in determining the most appropriate learning experiences for their students. The exception to this are programs whose key methodology is withdrawal of students from regular classroom contexts. Principals have consistently reported in the evaluations that teachers generally have developed an increased understanding of SMART data and the use of quality assessments to make judgements about students’ tracking and progress, resulting in more accurate assessments and diagnoses of students learning needs in both literacy and numeracy.

Despite the emphasis on whole school commitment, the evaluation identified some variability in the extent to which schools had changed their practice in identifying, monitoring and tracking students including:

- the variation in quality of initial teacher professional learning experiences,
- ongoing support that either contributed to negative perceptions, or attenuated the impact of training,
- the length of time over which training took place, influencing how soon a sense of shared implementation could be established.

The evaluation of the Individual Learning Plans highlights the integral nature of gathering and analysing student data as a pivotal step in the development, implementation and review of students’ Individual Learning Plans. Indeed, it is impossible to develop Individual Learning Plans without collecting and using student data.

Some key changes in broader teacher professional practice were identified as a consequence of the use of data in developing and reviewing Individual Learning Plans, including that teachers:

- had now become more reflective on their teaching practice through the constant reference to student data,
felt more confident in the use of data to identify student learning needs and informed planning. In some schools this has arisen because teachers had the opportunity to collaborate about the development implementation and review of the Individual Learning Plans for their students, and

could focus more intently on specific literacy skill sets based on identified student needs because they now have the data that enables them to justify this focus.

Mindful Teaching Mindful Learning was able to identify some changes in reported teacher actions that resulted from more systematic gathering and analysis of student data, even though the program was in early stages. These included:

- more explicit teaching of reading comprehension strategies, more specific tailored questioning of students based on an understanding of the individual progress of students in their class,
- strategic selection of texts based on students’ progress and development,
- participating in a cycle of teacher observation, including feedback and reflection.

In acknowledging the early evidence of changes in teacher behaviour, it is promising that there is a range of professional actions being undertaken at both the classroom and whole school level that demonstrate a new and clear understanding of the importance of student data both for tracking and also diagnosing student needs in making key teaching/learning decisions for students.

While each of the evaluation reports clearly emphasises the importance of ongoing and clear democratic educational leadership at the local school level, the impact of these programs and the emerging cultural change can only be sustained supported by adequate resources and whole school commitment. It could therefore be instructive to return to these schools in three or more years to identify the extent to which positive changes have been sustained.

4.5 Relative cost-effectiveness of the Literacy and Numeracy programs

It is not possible to conduct a definitive cost benefit analysis for any of the literacy or numeracy programs because the data presented in each of the reports is incomplete and not comparable. It is also not possible to quantify the unique contribution of the literacy or numeracy program from other sources (for example, schools may have implemented MULTILIT and Focus on Reading, as well as more general elements of the school improvement strategy such as more effective use of data). However, it is possible to gain some insights into the relative costs involved in the implementation of each program. These remain approximate, as individual schools implemented the various programs in slightly different ways (for example, choosing to train all staff rather than teachers of Years 3-6 or purchasing varying quantities of resources, or only partially implementing the full program).

The cost data that can be identified from the program evaluation reports is summarised in the following Table.
Table 9: Costs Associated with the Literacy and Numeracy Programs

<table>
<thead>
<tr>
<th></th>
<th>Accelerated Literacy (AL)</th>
<th>Focus on Reading</th>
<th>Reading to Learn R2L</th>
<th>TOWN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licence fee</td>
<td>Direct costs to schools were:</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Private provider cost $1500/teacher,</td>
<td></td>
<td></td>
<td>For the whole school intervention (only) - $20,000</td>
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<tr>
<td></td>
<td>Regional provider cost $360/teacher plus $135 for materials (not including salary and costs of regional staff)</td>
<td></td>
<td></td>
<td>For the whole class and individual intervention - $42,000 for up to 11 teachers and $53,000 for more than 11 teachers.</td>
</tr>
<tr>
<td>Initial training</td>
<td>6 days per teacher.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>required</td>
<td>Additional 2 days @ $198/teacher for mentor status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Additional 4 days @ $396/teacher for tutor status</td>
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<tr>
<td></td>
<td>Teachers participated in the equivalent of ten professional learning days over at least two semesters. Each participating teacher could need approximately six additional relief days to engage in team teaching, team/stage meetings, school visits</td>
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<tr>
<td></td>
<td>To qualify as a trainer attendance at an additional 34 workshops was required</td>
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<tr>
<td></td>
<td>The professional learning program comprised:</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>• eight days of training workshops, delivered in four two-day blocks</td>
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<tr>
<td></td>
<td>• classroom practice and evaluation between workshops</td>
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<tr>
<td></td>
<td>• a set of ten course books</td>
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<tr>
<td></td>
<td>• a training DVD of demonstration lessons with early years, primary and secondary classes.</td>
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<tr>
<td></td>
<td>The TOWN school leader and school principal or an executive member were expected to attend a two-day TOWN professional development course in Sydney.</td>
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<tr>
<td></td>
<td>Schools were advised to make provision for five professional learning days per teacher in 2009 (and 10 days in 2010), and for the school numeracy leader 10 days in 2009 (and 20 days in 2010).</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Resources required</td>
<td>Accelerated Literacy (AL)</td>
<td>Focus on Reading</td>
<td>Reading to Learn R2L</td>
<td>TOWN</td>
</tr>
<tr>
<td>--------------------</td>
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<td>------------------</td>
<td>----------------------</td>
<td>------</td>
</tr>
<tr>
<td><strong>ICT equipment, assessment materials</strong></td>
<td>$1000 PM benchmark kits, $1000 printing resources, $790 website development, $1000 PM benchmark kits, $5000 The Lexile Framework for Reading, $2160 Accelerated Literacy training materials</td>
<td>Student comprehension bookmarks; key texts to support Focus on Reading 3–6: Revisit, Reflect, Retell; Guided Comprehension in Grades 3–8 and An introduction to quality literacy teaching; and mini video recorders (Mino) and Levision pocket tripods to be used by teachers to collect visible evidence of student progress</td>
<td>$120 per teacher for the resource pack</td>
<td>TOWN had a focus on schools developing their own hands on materials, which was very demanding of teacher and coordinator time. Some schools have shared resources, and the TOWN website provides a further resource.</td>
</tr>
<tr>
<td><strong>Individual white boards for students and consumables such as highlighters, cardboard and marker pens.</strong></td>
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<td></td>
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</tr>
<tr>
<td><strong>Cost of providing teacher relief, travel and accommodation was extensive (varied from school to school depending on number of teachers involved)</strong></td>
<td>Cost of providing teacher relief, travel and accommodation, and coordinator time additional</td>
<td>Cost of providing teacher relief, travel and accommodation, coordinator time additional</td>
<td>Cost of providing teacher relief, travel and accommodation, coordinator time were additional</td>
<td>Cost of providing teacher relief, travel and accommodation, coordinator time were additional</td>
</tr>
<tr>
<td><strong>Regional facilitator and certified trainer salary costs are additional</strong></td>
<td></td>
<td></td>
<td></td>
<td>DEC central office development team salaries and regional facilitators costs are additional</td>
</tr>
</tbody>
</table>
Table 10: Costs of NPLN Intervention Programs

<table>
<thead>
<tr>
<th>Licence fee</th>
<th>Quicksmart</th>
<th>MULTILIT</th>
<th>TOWN (Intervention component)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initial training required</strong></td>
<td>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.</td>
<td>Most training of tutors is conducted in-house but tutors can attend one day initial workshop conducted by MULTILIT staff and a further 1 day advanced course.</td>
<td></td>
</tr>
<tr>
<td><strong>Resources required</strong></td>
<td></td>
<td>Student workbooks (must be purchased from MULTILIT)</td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Demands significant coordinator time (30 weeks per student engagement)</td>
<td>Demands significant coordinator time for managing, recruiting and training tutors</td>
<td>Demands significant coordinator and teacher time for participating in videoconferences</td>
</tr>
</tbody>
</table>
Cost effectiveness of whole class programs

The programs considered in this analysis are Accelerated Literacy, Focus on Reading, Reading to Learn, and Taking Off with Numeracy (TOWN). All the whole class programs were high cost, as they generally involved all teaching and learning support staff in multiple days of training (the majority of schools training teachers K-6 not just the Years 3-6 focus required by the initiative, and often long term casual teachers as well). Despite some schools attempting to defray costs to themselves by conducting training on weekends, the genuine costs of the programs (including opportunity costs) are high incorporating both the direct cost of the training and the replacement costs of teachers attending the training. The models also incur substantial ongoing costs for teachers to meet at least weekly to analyse the progress of implementation, and to develop lessons based on the resources utilised by the programs. These collegial meetings were often made possible only through the employment of additional staff and release time through national partnership funding. Despite the high costs, the program evaluation reports suggest that school leaders consider the programs (with the exception of TOWN) to have provided good value for money, given the extent of change in teaching and learning practices and collegial interactions made possible through the expenditure. As the strategic evaluation of the NPLN suggests, the scope of change attempted and the scale of funding available through the National Partnership was a significant factor contributing to the achievement of the initiative’s objectives.

Accelerated Literacy

The evaluation report for Accelerated Literacy (SEPEB 2012a) notes that the majority of schools implementing this program opted to train all of their teachers K-6. 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, a combining training days and in-school practice and support.

A snapshot of the typical direct costs to individual schools participating in Accelerated Literacy is provided in the example from the budget for a Primary Class 3 school (4 teachers) for Accelerated Literacy training and resources were as follows:

- $1000 printing resources
- $790 web site development
- $1000 PM benchmark kits (Nelley & Smith, 2005)
- $5000 The Lexile Framework for Reading (MetaMetrics, 2012)
- $2160 Accelerated Literacy training materials
- $5760 Accelerated Literacy workshops
- $1050 Accelerated Literacy tutor training.
The extensive number of training days required by Accelerated Literacy presented several challenges for schools (as did all of the whole class programs): the potential disruption to classes of 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. In contrast, private trainers were found to be costly and rigid in their approach. 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.

The resources recommended for use with Accelerated Literacy often required additional expenditure by schools, but were seen as valuable acquisitions to the schools’ capacity to deliver quality literacy lessons beyond the life of the National Partnership. The Accelerated Literacy program evaluation report suggests that resources purchased were well-used and highly regarded by participating schools. The NALP website was also identified as providing a valuable resource. In some schools, the Accelerated Literacy training was seen to be of value in helping teachers make better use of resources already present in the school but not in regular or effective use (including class sets of texts and interactive whiteboards).

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.

Teachers generally felt that the length of training was appropriate; any shorter and they would not have time to bring strategies into their classroom and reflect on their practice. The scope of training contributed to a common feeling of being able to share, support one another, collaborate and plan towards the same goals.

A number of regions trained or employed accredited Accelerated Literacy tutors to provide training for teachers – a cost that was not apparent to schools. There were variations and inconsistencies in costs associated with training for Accelerated Literacy across regions: for example, one region did not charge for teacher or tutor training; another region provides initial training at a fee and follows up basic training with additional network meetings once a term. Some regions chose to have their literacy consultants trained as tutors by the program developers in the Northern Territory, at Charles Darwin University.

Whole-school implementation of the program presents new sets of costs, particularly in the form of individual white boards for students and consumables such as highlighters, cardboard and marker pens. While these materials are seen as valuable and necessary parts of Accelerated Literacy lessons, it was frequently acknowledged that this expense would have to be built into future class budget allocations. The importance of providing these additional resources was appreciated by schools leaders, with almost all teacher respondents agreeing that material resources were made available.
The SEPEB report notes that many teachers indicated there were benefits to student engagement, provided through the use of interactive whiteboards, particularly with Stage 2 and 3 classes. While some schools chose to invest in ICT equipment, others chose assessment materials, and others chose to train teachers as mentors or tutors.

Focus on Reading

Focus on Reading 3-6 was an intense program with demanding timeframes, requiring commitment and leadership support from schools. The centrepiece of the Focus on Reading model; is teacher professional learning, conducted by Certified Trainers, who may be either regionally-based or school based staff. The requirements for becoming a Certified Trainer are extensive and as such the staff related costs (including teacher relief) were the major expense for this program. Focus on Reading required participating teachers to participate in the equivalent of ten professional learning days over at least two semesters. In addition, schools were advised that each participating teacher could need approximately six additional relief days to engage in team teaching, team/stage meetings or school visits, directly linked to the implementation of Focus on Reading 3–6. The recommended resources included the student comprehension bookmarks; key texts to support Focus on Reading 3–6: Revisit, Reflect, Retell; Guided Comprehension in Grades 3–8 and An Introduction to Quality Literacy Teaching; and mini video recorders (Mino) and Levision pocket tripods to be used by teachers to collect visible evidence of student progress. Some schools also bought magazine subscriptions and books for students to read.

As with all of the whole class programs, Focus on Reading required extensive time from a Literacy Coordinator (sometimes called Teacher Educator or Classroom Leader) for leading reflection sessions, mentoring and in-class modelling of effective teaching. Satisfaction levels with this model and the outcomes it achieved for the majority of teachers were high.

The extensive and comprehensive access to training and support materials contributed to the program as being perceived as providing value for money.

Reading to Learn

Reading to Learn is described in the program evaluation report (Urbis, 2012c) as promising a self-contained, holistic program for teaching reading and writing. The professional learning program offered by Reading to Learn comprised:

- eight days of training workshops, delivered in four two-day blocks
- classroom practice and evaluation between workshops
- a set of ten course books
- a training DVD of demonstration lessons with early years, primary and secondary classes.

Major financial costs included initial and ongoing training for teachers, relief for teachers to collaboratively plan and prepare materials, and purchase of resources for student use. The costs of the professional learning program were presented as follows:

- approximately $100 per teacher, per workshop day (average)
- $120 per teacher for the resource pack of training books and demonstration DVDs.
Teacher replacement costs, and travel and accommodation related expenses for attending training were additional to these.

The initial training proved to be one of the most contested areas of the Reading to Learn experience. Of all the literacy programs, the Reading to Learn training received the lowest ratings of satisfaction by participants. While many teachers found the initial training valuable, a number of respondents believed that it could be more effectively and efficiently delivered at lower cost and with less disruption to schools. One blunt assessment reported suggested:

“We did eight days that we could have been done in four. It was expensive.”

The most successful training was characterised by trainers who acknowledged the professionalism of teachers and who encouraged teachers to adapt materials and approaches to suit local needs. Other funded provisions such as in-school professional learning and support were seen as highly valuable by most teachers, and time for collaborative planning was identified as a key success factor. Many schools saw provision of training and ongoing assistance, especially for new teachers, as a significant budget challenge for the future. The consumables required by students, including highlighters, large quantities of cardboard and marker pens, were identified, as an ongoing budget requirement that needed to be included in future school planning.

The cost of providing teacher relief, travel and accommodation proved to be significant expenses for participating schools. Participants noted that only the scale of NPLN funds made it possible for them to undertake this training to the extent that occurred.

Reading to Learn required significant teacher time and effort to implement effectively with students, although not inordinately more than any of the other whole school programs. It did however, according to the evaluation report, contribute to a greater gain in NAPLAN scores than any of the other NPLN programs (SEPEB, 2012d, Table 4.5, p.27) — although these results need to be viewed with caution — and could therefore be inferred to represent a good return on investment. Reading to Learn also appears to have many of the same limitations as the closely-related Accelerated Literacy program, in that it does not cater well for more advanced students, and that many students soon find the strategies for scaffolding learning to be boring. Despite this, the meta-outcomes observed in Reading to Learn schools such as increased collegiality, better use of data and enhanced instructional leadership were similar to those reported by schools using other programs. While these outcomes may be due in part to other elements of the total NPLN initiative, Reading to Learn appeared to have provided a vehicle for whole school reform that was similar to the other programs considered. Considering all of the available evidence, it does not appear to be significantly more or less cost effective than any of the programs considered in the short term. This assessment may not hold for the longer term and remains to be tested, given the concerns about sustainability expressed by participants and the inherent limitations identified above.

**Taking Off With Numeracy**

Taking Off with Numeracy (TOWN) was the only whole school numeracy program option available for NPLN schools. 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. Each school was expected to identify a TOWN school
leader, to lead implementation of the program in the school. The school Principal or an executive member was also required to be part of the team implementing TOWN. Both were expected to attend a two-day TOWN professional development course in Sydney.

Schools were required to pay the following amounts to participate in the TOWN program:

- for the whole school intervention (only) - $20,000
- for the whole class and individual intervention - $42,000 for up to 11 teachers and $53,000 for more than 11 teachers.

Depending on how individual schools accessed professional learning, casual teacher, travel and accommodation costs are additional expenses incurred by schools. There was also costs at regional and systemic level for consultants, program coordinators and developers. Purchase of the TOWN program entitled schools to use the TOWN program and associated print-based and web-based resources, attend the TOWN professional development course, participate in regular TOWN group teleconferences for TOWN implementation team members organised by DEC, and access the TOWN website (http://www.takingoffwithnumeracy.com.au) and other sources of support such as the DEC TOWN staff. The TOWN funding did not cover the costs of employing (or providing off-class time) for the TOWN school leader in the school (as discussed later in this report, schools covered these costs through a variety of other funding sources, including other NP funds).

The program had a strong emphasis on site-based ongoing professional development for teachers, which was to be flexible to suit school needs. The aim was that teachers, school teams or school clusters would have opportunities for ongoing professional dialogue, reflection and team-teaching in focused numeracy teaching. This professional development was quite resource-intensive. Schools were advised in the NPLN Information Package for Schools (2009: 20) to make provision for five professional learning days per teacher in 2009 (and 10 days in 2010), and for the school numeracy leader 10 days in 2009 (and 20 days in 2010).

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 regular professional development given by the TOWN Coordinators and practical, hands-on assistance provided by regional maths consultants. There were 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. 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 in additional resources at a school level. This contributed to the common perception reported in the program evaluations that the TOWN program did not represent value for money.

Overall, the program evaluation report concludes that TOWN has been an effective program which has delivered outcomes for teachers and the NSW schools in which it was implemented. However it also questions whether the results observed were a consequence of TOWN itself or other factors. It concludes that 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 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 (eg 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.

In light of these findings, it would be difficult to conclude that TOWN provided value for money. While the concepts and strategies embedded in TOWN are laudable, whether TOWN is the most appropriate program for further development is questionable.

**Cost effectiveness of individual intervention programs**

The three programs designed as individual interventions the TOWN (optional) intervention program; Quicksmart and Making Up For Lost Time in Literacy (MULTILIT) are fundamentally different and it is not possible to compare them directly. However, from the program evaluation reports, it is evident that for both MULTILIT and Quicksmart that the initial start-up costs are significant, but not exorbitant and as they include initial training and some resources are relatively good value for money. Both programs draw on an evidence base in their design and have a logic consistent with their respective theoretical frameworks. Teachers report that there are elements from both of these programs that can be incorporated into general classroom practice.

While there are some complaints from some schools that the ongoing resource costs of MULTILIT limit the extent to which this program can be used without external funding (student resources may not be photocopied), the major costs for both programs are staff-related. Both programs have significant management and coordination costs and are based around “tutors” working with individual or pairs of students withdrawn from class on a regular basis over an extended period of time (30 weeks in the case of Quicksmart).

Schools have used a variety of means for engaging the “tutors”; in some cases volunteers (often parents) have been used successfully, but more frequently, have found it necessary to fund these positions as paid employment to obtain the quality and consistency of effort required. Many schools have diverted existing STLA, SLSO, Teacher’s Aides and Aboriginal Education Officer time into tutoring positions in an attempt to reduce apparent additional costs, a very expensive option for staffing the programs. Both programs provide training for teachers and tutors (Quicksmart training is included in the start-up costs), but this is less extensive than for the whole class programs described above. In both instances, teachers who have received the initial professional learning can successfully provide in-house training for tutors (although this carries a “hidden” opportunity cost). Both the ongoing resource costs and the staff-related costs were said to place limits on the number of children who could receive intervention at any point in time. The evidence available suggests that the majority of schools would choose to continue with both Multilit and Quicksmart after National Partnership funding ends, but servicing fewer students.

Despite the perceived relatively high level of costs involved in both programs, the evaluation reports contend that the schools involved considered the respective programs produce sufficient results to represent good value for money. However, the data in relation to student outcomes is not able to differentiate results uniquely attributable to the interventions from those that are due to whole class and whole school reforms occurring simultaneously.
In the case of TOWN, it does not appear that schools could elect to use the intervention component on its own without also committing to the whole school program (thus making it impossible to identify any upfront fee). The individual intervention component of the program was closely linked to the whole class intervention, with a separate set of costs associated with both program components. The individual component was seen as the least successful aspect of the TOWN program. This so-called “case management approach” was seen to be impractical, time consuming and not teacher friendly. Responses to requests for advice were not useful and there were many practical and technical challenges in seeking “expert” offsite advice.

Given that the ongoing viability of this aspect of TOWN is totally dependent on external funding to allow the continued employment of the TOWN facilitators to provide the case management services, it is difficult to see how this program element can be sustained beyond the life of the National Partnerships. In view of the poor ratings of value for money given to this element by existing users, it is difficult to see how any further expansion of this option as a systemic priority could be justified.

4.5.1 Did students not directly participating in the program benefit indirectly?

As noted above, most of the participating schools chose to train all staff in the school in relation to the relevant programs, not just the current teachers of students in Years 3-6. Many schools also facilitated access to professional learning for the intervention programs for other support staff in the school. This resulted in a deeper pool of teachers with enhanced pedagogical capacity, as well as a transference of some of the teaching and learning strategies in both the intervention programs being used in regular classrooms and the broader concepts relating to scaffolded learning or student engagement being applied in K-2 classrooms.

Neither the specific costs nor precise benefits of this wider engagement of school staff are quantified in the program evaluation reports, but the general findings discussed above and in the NPLN strategic evaluation apply here. That is, the totality of elements included as part of the broader NPLN initiative led to the more significant and lasting benefits including increased teacher confidence and competence, whole school focus, leadership density, increased collegiality and professional dialogue (among other things), and the professional learning programs associated with the specific programs played a significant role in contributing to these outcomes.

From the information in the program evaluation reports it is not possible to conclude that any of the programs were better or worse in producing indirect benefits for other students during the NPLN implementation period. However it is noted that teacher satisfaction with Reading to Learn and TOWN were lower than for other programs, potentially limiting the wider uptake of their fundamental principles. It must be said the success of implementation of any of the programs appeared to have more to do with the skills and motivation of the leadership within the schools involved and their capacity to influence whole school change more than anything to do with the programs themselves. One small additional benefit to students not in NPLN schools was noted where schools operated in clusters or communities of schools.

While not quantifiable, it was said that some of the principals of non-NPLN schools had taken up some of the principles behind the individual programs (and the broader NPLN themes such as enhanced use of student data analysis tools, enhanced teacher collaboration and peer observation
and so on). It should also be noted that since the conclusion of the NPLN, some of the more successful schools have operated as informal “lighthouse” schools, hosting visits from teachers from other schools who were interested in what had been undertaken and achieved (NB this is distinct from the Centres of Excellence initiative also funded through the Smarter Schools initiative). The extent to which this wider dissemination of the NPLN model has occurred appears to be a consequence of the initiative of individual district, regional and diocesan leaders rather than the perceived value of any of the individual programs.

4.5.2 What are the ongoing cost implications of sustaining these programs in schools?

The above discussion shows that all of the programs require ongoing financial commitment for them to remain viable in individual schools. The timeframe for the NPLN was such that there can be no certainty that the reform agenda had become firmly embedded in each participating school. To this end, Mindful Learning Mindful Teaching, which attempted to develop an orientation or philosophy in relation to how teachers and school leaders undertake their work had long term sustainability as an explicit objective. Yet, across all of the program evaluation reports, there was a firmly expressed view from principals and teachers that continued funding would be necessary for ongoing training, especially when staff turnover was high (as it often is in the NPLN schools). This need was identified regardless of whether the training was internally (through accredited trainers) or externally provided.

The necessity for schools to purchase specific resources to support each of the programs is also a consideration, but a minor cost in comparison to the major time costs involved in the most beneficial aspects of the programs; the development of hands-on resources for example, monitoring and coordination of withdrawal programs, development and monitoring of Individual Learning Plans and leadership and coordination of the collegial teacher planning, evaluation and reflection that is an essential part of the successful implementation of the NPLN “model”. In larger schools, this leadership and coordination role (i.e. Teacher Educators in Catholic schools or Classroom Leaders in government schools) generally equates to one full-time equivalent senior leadership position, which many schools also receiving Low SES National Partnership funds have chosen to continue beyond the life of the NPLN (Sydney Catholic Diocese also chose to support the Teacher Educator positions for an additional year from their own funds). How long these positions would need to remain in place for the desired reforms to become common and lasting practice remains to be seen. It should also be noted that turnover of the coordinator positions is high as the enhanced training and skills received by the incumbents has made them highly attractive for promotion candidates in other.

While the sustainability phase of the strategic evaluation of the NPLN has yet to be concluded, the emerging picture is one in which greater future benefits are likely to be obtained from investment in broader systemic agendas in relation to Quality Teaching than from promotion of any of the specific programs considered here per se. It is to be hoped that one of the fundamental principles promoted during the NPLN, that school decision making be done on the basis of evidence determines the future implementation, modification or abandonment of any of the programs undertaken by participating schools.
4.5.3 Were there unintended consequences? If so, what were the costs /benefits?

There have been few truly unintended or unanticipated outcomes, (either positive or negative) produced by the NPLN programs considered. The wider benefits identified have been considerable (such as increased principal collegiality within districts), but are not quantifiable from the evaluation reports in terms of either costs or ultimate impacts).

Similarly, flow-on benefits were noted in all programs considered, such as increased engagement, increased interest in reading, increased on-task behaviour (none of which were quantified) contributing to more pleasant and productive classroom environments, but not yet leading to any appreciable impact on measured literacy or numeracy outcomes. These positive outcomes, while not perhaps the primary intended outcome of the program are not however, unexpected, and do not carry separately identified costs.

Other wider benefits, such as systemic learning from the sharing activities and overall NPLN central monitoring, management and evaluation activities (including regional coordination) are also welcome, but not unexpected. It should be noted that this central and regional management infrastructure is a considerable expense, however, in many respects the size of this investment by the NSW systems and sectors was unique among the states and territories and arguably led to more significant change in schools than was observed elsewhere. In this sense, the establishment of this infrastructure provided good value for money and should be considered for any similar initiatives in future.
Chapter 5: Distillation of effective practices

The analysis of the eight NPLN program evaluations above revealed a wide range of effective practices employed by schools. In seeking to further validate these findings, the effective practices were then examined in light of the information gleaned from the recently completed Phase One of the *Evaluation of the take-up and sustainability of new literacy and numeracy practices in NSW schools* (Wyatt & Carbines, 2012). The initial list of effective practices was extensively tested with system and sector representatives (including policymakers, program managers and regional consultants), as well as teachers and school leaders in a sample of NPLN schools during late 2012. It was clearly acknowledged through these discussions, that while the effective practices are presented in the form of discrete cells within a matrix, they are not necessarily independent of each other, nor do they comprise a “recipe for success” as it is the combination of all of these factors that leads to cultural change on a scale that can make a real impact on student learning outcomes. It is important for schools to clearly understand the nature of their own context and then focus on the practices that will most suitably address the learning needs of the students under their care.

Table 11 below reflects the refined list of the practices which will form the basis for the resource to be developed in the next phase of this project. The resource will present authentic examples of these practices in action in NPLN schools to provide a springboard for action (or at least reflection) in other schools.
Table 11: Effective Practices Matrix, grouped by level of implementation

<table>
<thead>
<tr>
<th>System/Sector factors</th>
<th>Whole school factors</th>
<th>Classroom /teacher factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted professional support, organised at the system and sector level, for both school leaders and classroom practitioners is a significant contributor to the building of confidence and capacity of school personnel implementing literacy and numeracy initiatives</td>
<td>Effective school leadership takes an inclusive and collaborative approach to decision-making with teachers about issues that impact directly on student learning</td>
<td>Student engagement with learning is fundamental to confidence and enhanced achievement in literacy and numeracy</td>
</tr>
<tr>
<td>Systems/sectors have a key responsibility in establishing and maintaining high expectations of performance founded on clear accountabilities for stakeholders</td>
<td>If sustainable change in students’ literacy and numeracy outcomes is to be achieved, it must be driven by a whole school approach that ensures commitment and shared responsibility from all members of the school community, including parents</td>
<td>Students’ identified learning needs are addressed by explicit teaching and learning strategies, which may include specific intervention programs or tailored resources</td>
</tr>
<tr>
<td>Policies reflect the need for a consistent approach and high expectations for teaching and learning in literacy and numeracy</td>
<td>A whole school systematic approach to collecting, analysing, interpreting and tracking data focuses on student literacy and numeracy learning</td>
<td>Specific intervention programs and tailored resources are one of the tools for enhancing student learning outcomes</td>
</tr>
<tr>
<td>When systems/sectors communicate good practice through sharing of information, e.g. conferences, websites, Principal briefings, the potential for building school and teacher capacity is enhanced</td>
<td>Opportunities for student improvement are enhanced when there is whole school commitment to interventions based on student needs</td>
<td>Teacher acceptance of intervention programs is enhanced when such programs are underpinned by a sound research base and evidence of student improvement</td>
</tr>
<tr>
<td>A key role for systems/sectors is to establish and inform continuous improvement mechanisms for schools</td>
<td>Student learning of literacy and numeracy is most effective when there is collaborative planning, exchange of teaching and learning ideas and monitoring of student achievement data by teachers across stage levels</td>
<td>Ongoing teacher professional learning that reflects contemporary pedagogy is needed to support teaching and learning, including intervention programs</td>
</tr>
<tr>
<td>Systems/sectors have a key role to play in formally supporting schools to establish and maintain</td>
<td>A school culture characterised by collaborative planning and programming impacts positively on</td>
<td>In responding to students’ diverse learning needs, teachers must be flexible and adaptable in their</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>System/Sector factors</th>
<th>Whole school factors</th>
<th>Classroom /teacher factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>mutually supportive and collaborative networks for sharing practice</td>
<td>teacher pedagogy and student learning</td>
<td>use of programs and strategies</td>
</tr>
<tr>
<td>System/sector resources are required to ensure fidelity of implementation in relation to specific programs, e.g. use of Regional/Diocesan facilitators to provide professional learning</td>
<td>A school culture that supports the implementation of intervention programs and innovative teaching strategies is best when accompanied by tailored forms of professional support for teachers e.g., targeted professional learning, deep pedagogical knowledge, class release time for observation, reflection and collaborative planning.</td>
<td>Improvements in student learning occur when teachers combine the tailored implementation of intervention programs with whole class explicit teaching strategies</td>
</tr>
<tr>
<td>Systems and sectors have a key role to play in allocating resources to schools to support literacy and learning</td>
<td>Active instructional leadership impacts positively on student achievement in literacy and numeracy when accompanied by clear expectations for staff and students</td>
<td>The primary consideration for individual learning determines the choice of program or teaching/learning strategy</td>
</tr>
<tr>
<td>Systems and sectors have a key role to play in developing tools and frameworks that support school implementation of literacy and numeracy</td>
<td>A school culture with accompanying resources focussed specifically on what students need to learn contributes directly to student achievement in literacy and numeracy</td>
<td>Teacher tracking and follow-up of student progress through constant teacher monitoring of student data enhances learning outcomes</td>
</tr>
<tr>
<td>System policies provide a reform framework and context as necessary which give preference and priority to the way that schools and teachers spend their time with students in schools</td>
<td>Schools value the access to systematic, evidence-based approaches that target what students need to learn to improve</td>
<td>Teachers are well equipped to focus on student improvement when teaching and learning decisions are based on contemporary evidence based research</td>
</tr>
<tr>
<td></td>
<td>Student learning of literacy and numeracy is enhanced when the school adopts a whole school approach of common language by all members of the school community, including parents</td>
<td>The implementation of literacy and numeracy intervention programs in classrooms is enhanced when driven by teachers rather than classroom support personnel</td>
</tr>
<tr>
<td></td>
<td>Effective pedagogy begins with the student not the program</td>
<td>Effective teachers make informed decisions and utilise class time to focus on specific student learning needs</td>
</tr>
<tr>
<td>System/Sector factors</td>
<td>Whole school factors</td>
<td>Classroom /teacher factors</td>
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<tr>
<td></td>
<td>The effective use of ILP’s is a powerful tool in assisting teachers to plan, implement and monitor students’ individually tailored learning experiences, especially when parents are engaged in the process</td>
<td>Collaborative planning by teachers often results in the use of an agreed common language and the sharing of teaching and learning ideas and the range of texts being used for teaching literacy</td>
</tr>
<tr>
<td></td>
<td>Extended uninterrupted blocks of time “quarantined” for teachers and students to engage in literacy and numeracy activities are pre-requisites for student achievement</td>
<td>Individual student learning is enhanced when teachers make connections through all aspects of student learning, i.e. across all KLA’s</td>
</tr>
<tr>
<td></td>
<td>High expectations for student learning by all in the school community is essential</td>
<td>Learning in literacy and numeracy is enhanced when students are empowered to take greater responsibility for their own learning, including monitoring of progress against agreed learning goals</td>
</tr>
</tbody>
</table>
5.1 Common trends in the evaluation findings relating to factors leading to success in numeracy/literacy

The consultations referred to above suggest that for the purposes of communicating with teachers and school leaders, the effective practices can be further classified under a series of themes. These themes were refined with school leaders during case study visits, and also tested with key sectoral experts to ensure their accuracy, validity and applicability to schools.

It should be noted that while these effective practices were initially identified in the context of the work undertaken in NPLN schools in government, Catholic and independent sectors, it is evident from the outcomes of the consultations that they are relevant for all schools.

The nine broad themes for grouping effective practices are outlined below:

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreed whole school reform agenda</td>
<td>A clear and collaboratively established whole school reform agenda that is underpinned by both effective use of data and contemporary research in teaching and learning and ensures systematic delivery to address the learning needs of all students</td>
</tr>
<tr>
<td>Inspirational instructional leadership</td>
<td>Leadership actions that inspire whole school community commitment towards an agreed vision for enhanced student learning and quality teaching. This must ensure policies and procedures systematically facilitate effective and efficient school operation, particularly in relation to literacy and numeracy.</td>
</tr>
<tr>
<td>Purposeful student engagement</td>
<td>The promotion of a systematic approach towards student engagement in learning that is driven by a clear analysis of student learning needs in literacy and numeracy. This approach is accompanied by a positive, safe and secure learning environment that ensures appropriate learning provision for each student as a unique individual who is empowered to take responsibility for their own learning.</td>
</tr>
<tr>
<td>Differentiated teaching and learning</td>
<td>An approach to the teaching and learning of literacy and numeracy, that is underpinned by the application of teaching and learning methodologies that reflect a strong understanding of each student’s individual learning needs and contemporary research in classroom pedagogy.</td>
</tr>
<tr>
<td>Evidence based decision making</td>
<td>The development of systematic practices that ensure decisions are made and information reported, based on wide ranging qualitative and quantitative evidence at the classroom and whole school level about student achievement and whole school effectiveness.</td>
</tr>
<tr>
<td>Responsive teaching approaches</td>
<td>The application of teaching methodologies, including explicit teaching, that is understood by classroom</td>
</tr>
</tbody>
</table>

Table 12: Themes and Descriptions for Effective Practices
Practitioners and directly responds to students’ identified learning needs.

**Collaborative whole school culture**
All members of the school community actively participate in and are committed to the common purpose of enhanced student literacy and numeracy learning through engaging in professional dialogue, collaborative planning and the systematic exchange of resources, programs and ideas. This level of commitment and activity is reflected in a culture of shared responsibility for the learning well-being of all students in the school.

**Targeted professional support**
The provision of tailored professional learning opportunities for all members of the school community to enhance their effectiveness in relation to whole school leadership, classroom and school community responsibilities and contribute directly to a culture of continuous improvement.

**Tailored resource utilization**
The ongoing provision of tailored human, physical and technological resources designed to facilitate the teaching and learning process.

Whilst this list is neither exhaustive nor comprehensive, the themes are not dissimilar from those identified in other studies of effective school practices (see for example, Masters 2012; Effective Philanthropy, 2011).

The list of effective practices highlights the powerful impact that school leadership teams have in enhancing student literacy and numeracy outcomes. In creating a culture of student improvement through a whole school commitment to purposeful student learning, it is evident that educational leaders have the potential to influence student learning both at the whole school level and more indirectly at the classroom level. The importance of focusing on a range of practices such as purposeful student engagement, explicit instructional leadership and responsive teaching approaches is also highlighted.

The value of the nine effective practice themes is in the provision of a broad framework for both school leaders and classroom practitioners, highlighting key strategic areas that need to be addressed in reform initiatives enhancing student literacy and numeracy.

The Effective Philanthropy framework cited earlier, has 13 themes or headings, shown in Figure 2 below. This group has recently published a set of guidelines for use by schools. Entitled “Successful Schooling: Techniques & Tools for Running a School to Help Students from Disadvantaged & Low Socio-Economic Backgrounds Succeed” (2011), this document represents a framework and toolkit that schools can employ to guide their work with low SES students and other students who struggle to engage at school. The toolkit provides detailed and comprehensive instructions for schools down to the level of guidelines for recruiting staff to ensure that skills are matched with emerging student needs and whole school priorities. It does not focus just on literacy and numeracy but identifies across-the-board guidelines for building quality in student learning.
In contrast, the “nine effective practices matrix” focuses on specific strategies and practices that can be undertaken by school leaders at whole school level and educational practitioners at classroom levels to facilitate quality teaching and learning. Common to both models however is the underlying premise that it is the combination of factors linked to the distinctive contextual characteristics that will make a difference to student learning, ensuring that school leaders and classroom practitioners take a holistic approach towards all school and classroom improvement on student learning outcomes, depending on the particular characteristics of the learning context.

Figure 2: Themes in the Effective Philanthropy Framework

The nine practices represent a strong foundation for increasing the potential to enhance student improvement in learning outcomes. Indeed as one system administrator acknowledged,

*I've had a close look at these nine practices with some of my colleagues, including school Heads and we think you have it pretty much right. If we could have our schools focusing on each of these factors that are specified in the matrix, not only would our schools be more productive places but both teachers and students would be happier with the level of success that they achieve.*

**Agreed whole school reform agenda**

Tailoring these nine effective practices to the identified needs and organisational growth of the school requires a comprehensive analysis of a broad range of factors, for example, existing levels of student achievement, factors influencing student outcomes, teacher skills, community aspirations
and existing approaches to pedagogy. This may be driven at the outset by an agreed whole school reform agenda.

This reform agenda for whole school improvement must be led effectively by the school leadership team, ensuring that through collaboration, commitment and ownership are built with classroom teachers, parents and other members of the school community. This is the pre-requisite for systematic and long-term sustainable actions. These aspirations for improvement need to be believed by classroom practitioners who must also feel confident and competent to achieve them. In this way whole school priorities drive the energy and focus of members of the school community and provide an ongoing sense of satisfaction for achievement.

To achieve success the school Principal must be highly focused on the key outcome of the whole school reform agenda. Designed to focus on the learning outcomes of all students, this culture would build an ongoing understanding of both current and past student achievement levels and factors impacting on the student outcomes.

If long-term sustainable success is to be achieved through the whole school reform agenda, it is important that classroom teachers and the broader school community understand that enhanced student learning outcomes can only be achieved with accompanying improvements in classroom pedagogy.

Research undertaken by Geoff Masters on behalf of the Australian Council for Educational Research (2010:2) would suggest that school reform agenda is most effective when:

- The Principal and other school leaders have developed and are driving an explicit and detailed local school improvement agenda. This agenda is couched in terms of specific improvements sought in student performances, is aligned with national or system-wide improvement priorities and includes clear targets with accompanying timelines which are rigorously actioned.

- The school improvement agenda has been effective in focusing, and to some extent narrowing and sharpening, the whole school’s attention on core learning priorities.

- There is a strong and optimistic commitment by all staff to the school improvement strategy and a clear belief that further improvement is possible. Teachers take responsibility for the changes in their practice required to achieve school targets and are using data on a regular basis to monitor the effectiveness of their own efforts to meet those targets.

Finally it is imperative that key tangible measures are identified by schools to demonstrate progress along the journey of school improvement. Not only does this provide the opportunity for celebration of milestones achieved but also provides the opportunity for ongoing monitoring of progress.

**Inspirational Instructional Leadership**

The agreed whole school reform agenda can only be developed and implemented through inspirational instructional leadership. Zbar et al (2010) undertook extensive research in Victorian schools to identify ten lessons relevant to the improvement efforts of schools. A key finding from this study was the importance of schools having strong leadership, accompanied by a clear vision for the
school's future and direction and longer term leadership stability over time. Zbar et al (2010) described the situation as “strong leadership that is shared”. In Zbar’s study, the successful schools were led by Principals who were committed to making a difference with students, who are passionate about leadership, and who were willing to build and distribute leadership density throughout the whole school, in accordance with teachers’ leadership aspirations. These Principals were also highly focused on the development and systematic support of leadership teams to ensure their focus on the agreed vision and shared view of the future.

The research of John Hattie (2009) clearly highlights the key role that teachers’ intentions and actions in the classroom have on student learning outcomes. He also acknowledges the level of responsibility for school Principals in creating the conditions and culture that facilitate the work of teachers in classrooms. Hattie (2009) describes two key forms of school leadership: instructional leadership and transformational leadership. Hattie suggests that instructional leadership has greater power in terms of its effects on student learning outcomes and explains it in the following way (Hattie, 2009:83):

*It is school leaders who promote challenging goals, and then establish safe environments for teachers to critique, question, and support the teachers to reach these goals together that have most effect on student outcomes. School leaders who focus on student achievement and instructional strategies are the most effective. It is the leaders who place more attention on teaching and focused achievement domains who have the higher effects.*

Robinson (2007), quoted in Whalan (2012) interprets the notion of inspirational instructional leadership somewhat differently. In using the term “pedagogical leadership”, Robinson’s (2007) research highlights three key responsibilities in relation to pedagogical leadership. These include:

- participating and supporting quality teaching,
- establishing and communicating school goals for student learning,
- internal program coherence for sustainable improvement.

Whalan’s (2012) work on leadership is driven by her comprehensive analysis of the importance of teachers’ collective responsibility for student learning as a pivotal element for school reform. Whalan (2012:176) makes the following important point:

*A leader’s willingness to devolve their decision-making power, to give teachers greater control over their teaching and the organisation of their work, was also recognised in the case studies as a condition contributing to the development of teachers’ collective responsibility for student learning. Teachers were empowered when they were encouraged to take control over the results of their teaching and were able to make decisions about how resources were allocated towards such reforms.*

These findings have clear implications for the nature and role of school Principals as inspirational leaders in directing and guiding the whole school reform process.

**Purposeful student engagement**

Another recurring theme during consultations and visits to National Partnership schools related to the key role that a student’s disposition plays in their engagement in learning. Many Principals and
classroom teachers described this important aspect as purposeful student engagement. For the purposes of analysis, we have defined student engagement in the following way:

*The promotion of a systematic approach towards student engagement in learning that is driven by a clear analysis of student learning needs in literacy and numeracy. This approach is accompanied by a positive, safe and secure learning environment that ensures appropriate learning provision for each student as a unique individual who is empowered to take responsibility for their own learning.*

A clear link between purposeful student engagement and the promotion by teachers of high expectations for all students has been identified in other research. Masters (2010) describes this as an approach to learning which is characterised by “no excuses”. Simply put, this implies that no teacher can make excuses for children not learning, based on their background or learning ability.

Hattie (2009) would suggest that as a key dimension of purposeful student engagement, teachers should provide the opportunity to ensure that students experience perceived control over their learning so they can make purposeful learning choices that impact directly on enhanced outcomes. These could relate to the sequence of learning, alternative strategies, selection of texts where appropriate, and a range of other learning possibilities that exist within a framework imposed by the teacher.

The related research work undertaken by Effective Philanthropy (2011: 360) would suggest that there is a range of strategies that teachers can undertake to ensure that purposeful student engagement is enhanced. Among their findings they identified the following factors that can impact on purposeful student engagement:

- staff set up the classroom environment to support student participation to remove as many barriers to engagement opportunities as possible
- classrooms are set up to be bright, vibrant learning spaces
- classrooms are well resourced
- classrooms are designed and laid out in a way that supports student learning, that is in terms of classrooms being well lit, acoustics allowing students to hear throughout the room and all students being able to see the chalkboard
- classroom spaces are large enough and all can be changed around to support a range of different learning formats
- classrooms include individual “time out” spaces
- classrooms include individual “extension learning” spaces
- common classroom organisational systems are used across the year level groupings to help students feel comfortable and make it easy for them to engage in class
- student work is displayed on classroom walls to celebrate student effort, improvement and achievement, to demonstrate what professional high quality work looks like and encourage students to set high expectations for themselves.
One of the key outcomes of this work, according to Effective Philanthropy (2011), is an enhanced potential for students’ purposeful engagement on learning including:

- positive expectations for student behaviour, potential and performance
- improved student’s ability to connect with and engage at school
- enhanced student attendance
- increased student retention and motivation
- greater encouragement of constructive classroom participation and
- a reduction in challenging student behaviour.

While it must be stressed that there is no direct cause and effect among these factors and enhanced student engagement, or even between student engagement and enhanced student learning outcomes, it would appear that there is a range of strategies that teachers can systematically undertake to enhance the potential for improved learning outcomes through focusing on strategies for student engagement.

In a similar way, the work of Zbar et al (2010) refers to the underlying moral purpose of teachers’ classroom interactions with students, where teachers strive to create classrooms where they would be happy to have their own children. Teachers must feel that they can make a difference with students, irrespective of their background and ability, and must find a way to ensure that all students in their class become fully engaged in the learning process. Without this belief, teachers’ efficacy can be challenged and their productivity may suffer.

Nevertheless the recent work by ACER (2010) on factors impacting on student engagement in a tertiary education context highlights that the sense of moral purpose is not enough. This research work highlights the importance of timely feedback on performance, the opportunity to discuss grades and achievements generally and that students feel strongly supported by teaching staff. Each of these factors can be readily applied in the school context. Indeed the importance of providing feedback to students in the school context is consistently identified by Hattie (2009) as a key factor in enhancing purposeful student engagement.

**Differentiated teaching and learning**

Consultations with schools in the case studies conducted for this evaluation clearly indicated that for many teachers the most important prerequisite for enhancing learning was to have a thorough understanding of students’ background, both from a personal and learning perspective. Many Principals in the case studies encouraged teachers to take the time to develop a thorough understanding of each child’s learning needs and develop classroom contexts that directly responded to such learning needs. Whilst several Principals identified such actions as good teaching, it was acknowledged by both teachers and Principals that not all teachers understood or undertook these actions.

In this regard, the research of Goddard and Goddard (2007) is instructive. While their work indicates that well implemented differentiated instruction can significantly improve student learning outcomes, it involves teachers in adjusting the content and complexity of teaching and learning
activities, pacing the provision of appropriate resources and the development of appropriate support
levels and scaffolding to meet students’ differential readiness to learn.

Goddard and Goddard’s research, like the classroom consultations in the current project, implies that
teachers need to engage in the following activities to have an impact on enhanced student outcomes:

- developing a clear understanding about what students’ learning needs actually are
- including what students need to be able to understand and also to do
- ensuring that teachers have a clear and comprehensive knowledge of what students already
  understand and can do
- understanding those occasions when teachers need to vary the instructional methodologies
  to accommodate differences in student learning needs or pace
- ensuring a range of strategies that can be employed to build variation into their teaching
  plan
- understanding how teachers will accommodate differences in learning preference style and
  interest.

Schools that have adopted a holistic education model focus on making sure that staff have the skills,
tools and support they need to build differentiation into their instructional/class plans. For example,
case study discussions identified Principals who clearly understood the importance of developing a
K-6 learning continuum, where teachers have built a professional repertoire to engage students
effectively in learning, irrespective of their learning background and challenges.

Zbar et al (2010) also emphasise the importance of explicit teaching of key concepts and skills,
especially in the foundational areas of literacy and numeracy in the early years of schooling.
Differentiated teaching and learning is enhanced when teachers are innovative in the use of
communication technologies and other teaching resources that relate to individual or small group
learning based on individual students’ learning needs.

Whalan (2012) endorses the use of in-school professional learning teams and the systematic use of
available expertise, both in school and out of school as a means of ensuring a focus on differentiated
teaching and learning. Whalan’s research indicates that professional learning of this kind results in a
more consistent and systematic approach to addressing students’ learning needs.

The research of Sugai (2008) advocates a three tiered approach towards student learning and
teacher actions to ensure that individual learning needs are catered for. As the model below
indicates (Figure 3), the first-tier is the approach adopted for the vast majority of students where
syllabus outcomes are aligned to instruction for all students. At the second level supplemental
interventions are developed for students identified as being exposed to some learning risk. The third
tier is tailored for students identified as being high risk learners and is much more intensive and
focused to ensure that learning outcomes are produced providing a “no excuses” approach to
learning for all students.
In applying the three tiered model to assist student learning in literacy and/or numeracy, it is imperative that the starting point for consideration of its application is the particular identified learning needs of each student. Despite its increasing applicability across a range of learning settings throughout New South Wales, its success depends strongly on the ability of the teacher to accurately diagnose students’ learning needs, to place the child on the appropriate tier and then ensure that the tailored provision of learning is in direct alignment with the identified learning need.

In accordance with the above model those students on Tier three will most commonly require individual interventions. This evaluation has demonstrated that such tailored provision requires intense resourcing and often teacher capacity building. Indeed such additional support mechanisms also contribute to the initial and ongoing cost of ensuring that Tier three students are satisfactorily supported to achieve expected student learning outcomes.

The “Best Start” program is being increasingly employed by the New South Wales Department of Education and Communities’ schools for its early years students at present. A key element of this approach is the application of the three tier model through a personalised learning approach. While its efficacy is being increasingly recognised, the adoption of such a methodology has been clearly underpinned by the importance of ongoing teacher capacity building, the provision of initial resources as well as ongoing supply of expendable teaching and learning materials, as a key part of individual interventions. This cost factor is an important consideration in the placement of students in Tier three and should always be considered when such in methodology for differentiating teaching and learning is being considered. In this
way the lessons from the review of the eight evaluations are instructive due to the challenges that some schools experienced in providing ongoing support and resource provision post the funding period.

Such ongoing challenges for schools highlight important consideration, underlined by the evaluation of the eight programs about the most approach appropriate placement of students in terms of individual direct intervention or whole class tuition. At the most pragmatic level it is essential to consider not only the ongoing implementation of two diverse approaches to assist student learning but also the longer term sustainability for students, particularly when they met out of a withdrawal situation. With appropriate and explicit pedagogical approaches by teachers, both have been seen to enhance student engagement. However the sustainability of the learning outcomes must also be considered, especially when students from a withdrawal learning situation make the transition back into whole class instruction. The evaluations cited in this report highlight the educational challenges for students as well as teachers when young people make the transition from a withdrawal situation back into whole class setting.

Evidence based decision making

Evidence based decision making is a key prerequisite for ensuring that teachers make informed planning decisions for effective pedagogy based on current and comprehensive data about students’ learning needs. Masters (2010) would suggest that high priority be given to the school-wide analysis and discussion of systematically collected data on student outcomes, including academic, attendance and behavioural outcomes. Data analyses consider overall school performance as well as the performances of students from identified priority groups; evidence of improvement/regression over time; performances in comparison with similar schools; and data from tests such as NAPLAN, which measures growth across the years of school.

Indeed the emerging research in this area clearly indicates the importance of ensuring that teachers’ decision-making for the planning of learning experiences is thoroughly informed by a range of student learning data. Equally important is the role of the school leader in ensuring that a whole school approach is developed to such professional activity to ensure a consistent culture of using data for informed decision making. The school leader also has the responsibility for ensuring that all members of staff understand the protocols for gathering data and are able to understand, analyse and interpret the data for the teaching and learning experiences for every student.

Best practice, highlighted by Masters (2010) and observed in some case study schools includes that:

- the school has developed and is implementing a plan for the systematic collection of a range of student outcome data including both test data and quality classroom assessments;
the school has identified and can demonstrate that it is using tests and other assessment tools to monitor school-wide achievement and progress in areas of national focus such as literacy, numeracy and science;

an individual or team has been given responsibility for planning the collection and analysis of school-wide data and for summarising, displaying and communicating data to the school community;

all teaching staff have access to a broad range of student achievement data and use it to analyse, study and display individual and cohort progress;

professional development is provided to build staff skills in analysing and interpreting data;

school leaders, as part of their responsibilities, regularly work with their teams to review achievement data relating to their areas;

time is set aside for in-depth staff discussions of achievement data and of strategies for the continuous improvement of student outcomes;

the school systematically monitors other performance data, including data relating to student attendance;

school disciplinary absences and other behavioural data, school completion, student destinations and stakeholder perceptions and engagement;

data are used in building a culture of self-evaluation and reflection across the school; and the school uses student achievement data to drive school-level decisions, interventions and initiatives.

In order to achieve exemplary practices like those outlined above, the case study analyses indicated that effective student data management starts with schools and teaching staff being clear about the following issues:

• what the teachers need to understand about students
• what analysis they need to undertake to understand that
• what data they need to undertake the analysis
• what format they need for data to be presented in to be able to analyse it most easily
• what type of data management and reporting system they need to collate, store, analyse and report on the data effectively in the classroom, whole year and whole school level

Analysis of case studies conducted during the evaluation of the NPLN in NSW schools revealed that different schools manage these processes in different ways. A small number of schools provide teaching staff with a suite of tools to help them step through the above process and encourage them to use these tools as part of their regular professional teaching/learning team activities. Other schools schedule regular data review meetings (eg. fortnightly/monthly) as part of their standard calendar of staff meetings to provide dedicated time for staff to cycle through the above process,
review different aspects of their students’ performance data and develop strategies to address specific learning gaps/needs over a series of weeks.

A limited number of schools also allocate a certain amount of student free time each semester to allow staff to participate in structured/facilitated data sharing and analysis activities (often timed to coincide with the annual curriculum planning cycle). In some schools, leaders often play an active role in the above data analysis sessions and use them both to get a better understanding of how the student population is performing and to signal/reinforce the importance that the school places on using data to inform and improve teaching/learning activities.

**Responsive teaching approaches**

Teachers generally are not in a position to engage in responsive teaching approaches without constant reference to data as a tool for both planning student learning experiences and monitoring student learning over time.

The research work relating to this effective practice published by Effective Philanthropy (2011) highlights the importance of teachers being able to adopt a reflective teaching approach if they are to become constantly responsive to student learning needs. The key messages from this research indicate that the most effective teachers combine strong professional teaching skills with reflective teaching practice. They assess student performance on a regular and frequent basis to understand the progression of each student and what they need to progress. Where their students struggle with an area, teachers ask themselves what they can do in additional or differently to help the student to learn. Taking responsibility for their students’ learning they then adapt their teaching strategies and practices to help make that happen.

Masters (2010) highlights the important role of the Principal in ensuring that the research base informs responsive teaching practices in all classrooms to ensure that every student is engaged, challenged and learning successfully. In this situation teachers understand and use responsive teaching strategies which may incorporate explicit instructional techniques to maximise student learning. The importance of the Principal’s role in assisting staff to engage in differentiated teaching approaches is also highlighted by Hattie (2009:236) who suggests “it is the differences in the teachers that make the difference in student learning.”

Masters (2010) suggests that when responsive teaching practices become part of the culture of the school, the following professional actions can be observed:

- teachers set high expectations for every student’s progress and ambitious targets for improving classroom performances;
- all teachers implement teaching methods that have been shown to be effective in promoting successful learning for all;
- teachers create classroom learning environments in which all students are engaged, challenged, feel safe to take risks and are supported to learn;
- teachers work to build students’ beliefs in their own capacities to learn successfully and their understandings of the relationship between effort and success; and
• teachers provide regular and timely feedback to students in forms that make it clear what actions individuals can take to make further learning progress.

Collaborative whole school culture

Collaborative whole school culture is the seventh effective practice identified through school consultations. This is characterised by a democratic approach to decision-making and a strong commitment to assisting the professional growth of all staff, but most importantly, an ongoing commitment towards maximising the learning of every student, irrespective of their ability. This observation is strongly supported by contemporary research e.g. Zbar et al (2010) and Masters (2010), who suggest that in a school characterised by a collaborative culture, there is an agreed deep belief that every student is capable of learning. Within these settings, the sole purpose of the school is to enhance student learning through the development of positive and caring relationships among key stakeholders in the school.

Within these settings school leaders have built a climate of mutual trust and support where the focus on conversations revolved around assisting students to maximise learning opportunities. The learning environment is inclusive of all students, irrespective of factors that may potentially inhibit their learning. Further, the research highlights the importance of student well-being as the lynchpin for facilitating student learning. In these contexts, students are taking responsibility for achieving learning goals in collaboration with classroom teachers.

Consistent with the observation of case study schools, these schools also demonstrate high levels of collegiality and the opportunity for professional sharing and mutual learning. There is evidence of professional learning teams, working to enhance professional growth around topics/themes emerging as priorities and opportunities are provided for teachers to have some time off class to share experiences, achievements and challenges. In some schools this also extends to the regular sharing of classroom teaching programs and related documentation for student learning.

Expectations of all staff are negotiated and clear and all members of staff are aware of each other’s responsibilities. The importance of professional accountability where all members of the school community work towards agreed outcomes and share achievements and challenges relating to individual accountabilities in an ongoing responsibility.

In a recent US research report (http://www.turningpts.org/pdf/Teams.pdf), designed to “turn middle schools around”, collaborative school culture was identified as the key strategy for initiating sustainable change within schools. The report describes the concept in the following way:

In a collaborative culture, members of the school community work together effectively and are guided by a common purpose. All members of the community—teachers, administrators, students and their families—share a common vision of what the school should be like. Together they set goals that lead them toward this vision.

In doing so, they create a culture of discourse in which the most important educational matters facing the school are openly and honestly discussed. Members respect each other, value their differences, and are open to each other’s ideas. Even when there is disagreement, people listen to each other, because they believe deeply that differences are vital in moving their school forward.
The teachers in Turning Points schools know they can be more effective and are continually looking for the piece of advice, the book, the research, the organizational structure that will help them improve. The many different voices, experiences, and styles of the school community add to its strength and vitality.

The research report also identifies the key steps for identifying collaborative school cultures, many of which were evident in the case study schools:

- **To build a collaborative culture, members of the school community:**
  - Share the belief that working collaboratively is the best way to reach the school’s goals
  - Develop organizational structures that allow teachers to form teams and work together
  - Agree on norms so teams can work effectively
  - Define a vision for the school based on what students should know and be able to do
  - Set goals to achieve the vision.

**Targeted professional support**

Every school engaged in the National Partnership initiative has experienced a process of change, most commonly in the way that student learning is undertaken both at the classroom and whole school level. Because of the diverse and unexpected challenges that this process delivers, every member of the school community will require tailored professional support. The National Partnership initiative has already highlighted the pivotal leadership role undertaken by the school Principal. However, every leader in case study schools has highlighted the importance of acknowledging the learning journey in which they are immersed while ensuring that appropriate professional support is provided for their classroom practitioner team members, many of whom have been challenged to adapt or even modify their classroom practice.

The notion of teacher capacity building is a fundamental prerequisite for all members of the school community if change is to succeed and be sustainable. However, the mistake clearly avoided by case study schools was to adopt the easy solution of “one size fits all”. On the contrary, while some teachers have been engaged in learning new and different classroom methodologies, often through peer observation and mentoring, others have been engaged in the development of leadership capacities to lead teams at whole year or department levels. The importance of this point is the emphasis on the provision of tailored professional learning experience, aligned not only with current but also future emerging responsibilities.

Such approaches accord directly with the recent research on transforming schools (Hargreaves and Fullan, 2012), where they suggest tailored professional support must be employed to build teachers’ “professional capital” to thrive on the change process and “to make a difference in the lives of children”. As Fullan (1993:2) reiterates, “moral purpose keeps teachers close to the needs of children and youth; change agentry causes them to develop better strategies for accomplishing their moral goals.”
From a different perspective, Hattie (2009:254) suggests that while the field of education is abundant with innovations to improve teaching expertise, it only “touches” a very small percentage of teachers. The value of providing professional support that is tailored to teachers’ needs therefore cannot be underestimated. If teachers are expected to build commitment to innovation and change, provision of support would appear to be an important tool for encouraging them to at least examine existing practice and even adopt or adapt new innovations to enhance student learning outcomes.

Whalan (2012) identified professional development as one of the key elements in building the necessary culture to ensure that teachers engage in a sense “collective responsibility” for the change process. Along with professional community, relational trust, accountability and efficacy, Whalan (2012) suggests that each of these “interconnected discourses” relates directly to the concept of “teachers’ collective responsibility”. It is important to recognise that teacher professional learning is touches on individuals and is part of their schools’ culture. There is a vast difference between schools in which individual teachers attend courses or seminars that are of particular interest to themselves, and schools in which the normal way of operating sees all members of staff as part of a learning community, where teacher knowledge and skills are constantly refreshed and refined through a variety of planned interactions that might include peer observation, sharing of reflections or collaborative planning. This was emphasised in the NPLN case study schools where tailored professional development was seen as one of the most important positive influence on sustained change.

**Tailored resource utilisation**

The final Effective Practice identified through case study consultations related to the notion of tailored resource utilisation. This practice was identified by many case study schools as an emerging learning because of the sudden arrival in the school of a relatively large amount of funds that allowed purchase of resources on a scale not previously possible. While some schools acknowledge a level of uncertainty about the most expedient way to expend the funds, others used the schools change agenda in literacy/numeracy and the accompanying annual action/strategic plan as the fundamental tool for negotiation with the school community.

In those schools where identified priorities articulated in the plan were clear and understood by all stakeholders, less discussion ensued about the most effective use of resources. Some Principals would still concede however, that in determining the most appropriate expenditure of resources, too much was invested in physical resources and insufficient in human resources that could be employed to build teacher capacity, accompanying organizational change and longer term sustainability. However as the journey of change evolved, these issues were readily resolved.

It is also instructive that Principals also cited the need of physical or human resources varied over their change journey. The more effective strategy appears to have been the early expenditure predominantly on human resources with some emphasis on physical resources and then this process reversing when the change began to show evidence of having an initial impact.

These findings accord with both Zbar et al (2010) and Hattie (2009) who would suggest that most highly effective school leaders are very diligent about ensuring they select the resources that will maximise the learning impact for students. Most commonly this relates to the identification of educators with the relevant skills at the beginning of the change process, to facilitate the change in
question and employing them to formally share that expertise/understanding with professional colleagues.

While these skills and understandings are being developed, the highly effective Principal is also cognisant of the nature and demands of the intervention programs to be put in place. In this way, the skills of teachers are being developed within the framework of the particular intervention programs to be implemented. Where this has not happened concurrently, important time can be lost in preparing for the implementation of the change process.

Each of the above nine practices is not intended to provide a strict recipe for successful change in schools. They are however, designed to identify the range of levers that school leaders and their communities can manage in the light of their distinctive contextual and cultural characteristics to implement and sustain whole school change for the benefit of students and other members of the school community.
Chapter 6: Conclusion

Looking across all of the program evaluation reports, it is evident that each of the eight programs, while very different in nature, produced some benefits for at least some of the schools involved in their implementation. While the programs cannot be directly compared, each was credited with having a positive impact on the culture of teaching and learning across the range of schools, particularly in making teaching more responsive, engaging and purposeful. While the measured student outcomes data is not conclusive, the reports collectively indicate observable changes in student behaviour and attitudes towards literacy and numeracy.

These results are not an unreserved endorsement of any of the programs or approaches per se, nor (with the possible exception of TOWN) can they be interpreted as indicative of cause for widespread discontinuation. TOWN, more than the other programs, suffered from a perhaps incorrect perception that it did not deliver value for money (while still able to be adapted successfully in some schools) and structurally was less likely to be sustainable into the future.

More importantly, it is essential to consider the context within which the programs were implemented as the primary determinant of their apparent success or failure. The programs were not part of a clinical trial of the interventions in which their unique impact might be assessed. They were implemented as part of a suite of reform elements that collectively aimed to enhance literacy and numeracy in the schools involved. These elements included increasing teachers’ capacity to use data, to engage in critical reflection and to adopt a more collaborative and collegial way of working. It is arguable that the broader reform contributed more to the results observed than any of the programs themselves. Moreover, the programs were designed essentially to address the learning needs of students from years 3 to 6. Any judgements about the potential efficacy of these programs in eg, high school years should therefore be cautioned.

Conversely, it can also be argued that the programs contributed to the success of the reform initiative by providing a structure and a focus to the teacher professional learning and subsequent pedagogical approaches adopted. It should also be acknowledged that the wider context for the implementation of these programs (ie the Smarter Schools National Partnership) was one in which significant amounts of funding were made available to schools. This funding allowed for whole school professional development and coordinator release time that may not have been available should the programs be adopted in other contexts.

It should also be said that the programs were implemented within a reform context where the expectation and accountability for change were clearly communicated to participating schools. While some schools were more successful in implementing their chosen program than others, analysis of the eight program evaluation reports showed that the success factors at the local level were similar more related to common pedagogical or school organisational principles than to any unique feature of any particular program.

These principles or “effective practices”, as we have described them, have been identified in the body of this report and grouped into a number of key themes. These practices are similar to the effective schools and quality teaching research literature. They provide a framework within which improvement efforts can be designed.
For many schools in NSW and elsewhere, they will simply be part of “business as usual”. As Chapter 5 demonstrates, the support for these practices in the research literature gives confidence that the identification of these factors in the program evaluations and the strategic analysis was, in fact, correct. At the same time, they also lend support for the analyses of previous researchers, such as Hattie (2009), Zbar et al (2010) and Master (2010) among others.

Where the findings of this analysis do diverge from the previous research is the emphasis on the interaction between school efforts, programmatic effects and systemic support. The program evaluation reports confirm the conclusion reached in Wyatt and Carbines’ (2012) evaluation of the NPLN in NSW that it is the combination of reform elements, not one aspect in particular that makes a difference in creating sustainable change. The implication from this is that in future school improvement efforts, schools cannot pick and choose from among the practices but must address all areas. This is not to say that within any given school some areas will be more consistent with good practice than others or that equal effort will be required in all areas. This conclusion suggests that systemic efforts to support school improvement are both warranted and justified. While the research literature and the results of this analysis all highlight the importance of strong principal leadership in driving change, it is evident that the pace of change can be escalated with focussed external support. This is particularly the case when the existing school culture is deeply entrenched, ineffective teaching practices based on outdated knowledge and skills the norm, and student outcomes seen as a product of the students’ backgrounds rather than a result of teachers’ practices.

While the identified effective practices are not new, illustrations of school change, “success stories” and learnings from their improvement journeys can more widely support schools. There is no question that the nine effective practices identified through this evaluation have broader applicability to schools not only in terms of those with similar characteristics but also to primary schools generally. However one important caveat is noteworthy. The review undertaken of the eight program evaluations focused exclusively on primary schools and particularly those with students suffering from deficits in literacy and/or numeracy. It would therefore be naive to consider that such practices could be equally applicable in secondary school settings. Indeed extrapolating beyond the data provided highlights the particular limitations of this evaluation or making generalisations or the broader educational context from kindergarten to year 12.

The website planned as the next stage of development of this evaluation will be of valuable assistance to schools identifying areas for development for the future. It is important that practitioners see authentic examples relevant to their own context, to visualize potential in their own school.
Chapter 7: Next Steps

While this project has two distinct phases, it should be noted that the phases are in fact iterative, and involve extensive consultation, testing and refinement of concepts and ideas developed in early stages of the project. The essence of Phase Two (b) of the project is to take the effective practices represented in the matrix shown in Appendix 1, and illustrate these in a variety of ways in a resource that will be accessible to teachers and school leaders.

The key steps in this phase, which will be discussed in greater detail below, are as follows:

1. test and validate the effective practices framework through consultations with system and sector representatives and in a sample of schools
2. gather examples of practice from a sample of schools that participated in the NPLN that illustrate these practices. These examples might include PowerPoint presentations, video clips, case study reflections, or other school produced documentation
3. develop a design brief setting out the key considerations for what the on-line website might “look like” or be organised, that will allow a website developer to assemble the collected material in a coherent, but interesting and engaging format. The design brief itself will be the subject of consultation with systems and sectors.
4. implement the design brief to develop a draft prototype website
5. test the website with contributing schools to develop a final product
6. provide the DEC with a final copy of the on-line resource for wider dissemination.

Table 13: Proposed Timeline for Phase 2

<table>
<thead>
<tr>
<th>Action</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Phase 2b commencement</td>
<td>Late July/August 2012 (following endorsement of draft findings from the strategic review on behalf of the NSW Minister for Education)</td>
</tr>
<tr>
<td>Consultations</td>
<td>August -December 2012</td>
</tr>
<tr>
<td>Development of design brief based on above focus group feedback</td>
<td>November 2012</td>
</tr>
<tr>
<td>Product development</td>
<td>September 2012-February 2013</td>
</tr>
<tr>
<td>Delivery of Final report</td>
<td>January 2012</td>
</tr>
<tr>
<td>Product testing and refinement</td>
<td>Term 1, 2013</td>
</tr>
<tr>
<td>Development of dissemination strategy and final draft of the resource</td>
<td>End Term 1, 2013</td>
</tr>
</tbody>
</table>

Required deliverables for Phase 2b

The following deliverables will be developed during Phase 2b of the project:
1. Project Plan for Phase Two (b)

Following acceptance of the Progress Report for Phase Two (a), Erebus will submit a project plan for Phase Two (b) – detailing the proposed steps to be undertaken to design, develop, test, refine and deliver the on-line resource by the end of Term One, 2013.

2. Detailed design specifications for Phase Two (b)

In consultation with the Project Reference Group (and other relevant stakeholders), Erebus will submit detailed design specifications for the on-line resource. The design specifications must provide details of the proposed delivery platform as well as proposed specific formats for presenting the findings of Phase Two (a).

3. Final Report (this report)

The Final Report will provide an overview and comparative analysis of the findings of all eight program evaluations and related information, and provide an update on work towards the production of the on-line resource (and its method of delivery to users).

4. Functioning on-line resource

Phase Two (b) will result in the development of a tested, fully functioning and user-friendly on-line resource to effectively share information and advice with schools across the government, Catholic and independent school sectors. This is the major deliverable for this phase and is anticipated to be completed by the end of Term 1, 2013.


National Centre for Literacy Education (2013) *Remodelling Literacy learning: making room for works*


**Resources and Tools**

The following resources and tools relate directly to the teaching and learning of literacy and numeracy and have been employed by several schools engaged in the National Partnership program:

**Tools**

**National School Improvement Tool**

The National School Improvement Tool (NSIT) brings together findings from international research into the practices of highly effective schools and school leaders. The tool assists schools to review and reflect on their efforts to improve the quality of classroom teaching and learning. It supports school-wide conversations – including with parents and families, school governing bodies, local communities and students themselves – about aspects of current practice, areas for improvement and evidence that progress is being made.

**NSW DEC Analytical framework for effective leadership and school improvement in literacy and numeracy**

The NSW DEC Analytical Framework and the accompanying professional learning program, *Team Leadership for School Improvement K-12*, provides schools with structured and comprehensive support to identify school priorities and plan appropriate actions for school improvement.

**Great Schools Checklist [PDF]**
The Great Schools Checklist is a useful tool identifying 10 elements against which you can systematically and objectively assess what your school is doing well now and the extent to which it is proactively seeking to shape the future of education. The checklist is published by the Teacher Learning Network.

**Measuring Your Family-School-Community Partnerships** [PDF]

This tool helps schools examine how to reach out and involve families and the community in children’s learning. It can help your school assess the strength of its partnerships, indicate focus or direction of partnerships, and identify areas that can be changed. This checklist has been developed by the Wisconsin Department of Public Instruction.

**Pathways to school improvement**

This tool provides practical ideas—drawing on policy, research and best practice—on issues critical to educators engaged in school improvement. This resource was developed by the North Central Regional Educational Laboratory.

**Resources**

**PLANE**

Pathways for Learning, Anywhere, anytime – a Network for Educators (PLANE) is an online educator community and networking space that provides accredited professional learning courses, as well as innovative multi-media resource and collaborative tools to transform teaching practices the 21st century.

**Teach, Learn, Share**

The Teach, Learn, Share database is a national resource where educators and education systems can share their most effective approaches to literacy and numeracy teaching and learning in Australia.

**What Works**

The What Works Programs is a set of materials for those working in schools to assist them to plan and take action to improve educational outcomes for Australian Indigenous students.

**NSW Curriculum Learning and Innovation Centre**

The NSW Curriculum Learning and Innovation Centre supports learning and teaching by providing resources and services to students and teachers, focusing on Literacy and Numeracy (including Best Start), regional capacity building, and linking with state and national programs, such as the Australian Curriculum.

**MySchool**

The My School website includes profiles of almost 10,000 Australian schools and provides information on individual school performance, including results from national literacy and numeracy tests.
## Appendix 1: Summary of Findings of Desk Analysis

### Table 14: Program Evaluations: Literacy

<table>
<thead>
<tr>
<th></th>
<th>Multilit</th>
<th>Accelerated Literacy (AL)</th>
<th>Focus on Reading 3-6</th>
<th>Reading to Learn</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Which factors or contexts have enabled the most significant improvements for student outcomes for each program?</strong></td>
<td>Intervention is structured to work effectively with “low progress” readers. In the current study, “low progress readers” have been identified based on students’ most recent NAPLAN scores. The program leverages off best practice and current research in reading, and addresses each of the five areas of reading instruction: phonemic awareness, phonics, fluency, comprehension and vocabulary. MULTILIT would appear to work best when: • Provision can be made for intensive one on one instruction, although it can</td>
<td>Caveat: Only the Reading component of AL was examined. School choice to select the program rather than “Regional imposition” of the program enhanced teacher enthusiasm. Requires for maximum effect, a whole school approach to teaching literacy. Therefore suits those contexts best where there is active support from the Principal, and teachers seek to improve reading literacy levels at a whole class level, rather than through withdrawal. Relies strongly on scaffolded learning from year to year</td>
<td>Focus on Reading 3-6 is an intensive professional learning program for teachers to support the explicit teaching of the key aspects of reading in the middle and upper primary years; namely comprehension, vocabulary and reading text fluency. The program draws from a sound research base that justifies the need for these key aspects to be at the forefront of literacy teaching and learning in the middle years. The program requires ongoing support and school leadership drive, and highlights the importance and use of: • rich texts, particularly subject-based texts, multi-</td>
<td>Similar in intent to Accelerated Literacy, this 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. The intention is to involve all students in common activities, creating a class environment in which all students are continually engaged in reading for pleasure and in successful completion of literacy tasks.</td>
</tr>
</tbody>
</table>
be readily employed in small group learning settings
- The approach is clear, explicit and prescriptive (despite the extensive variations in the current program evaluation reports)
- Students are effectively engaged
- The MULTILIT tutor has been well trained to understand the philosophy of MULTILIT
- There is a close link between the classroom literacy program and individualised interventions
- The reading program integrates with such areas as spelling, comprehension and writing
- There is an ongoing budget for teacher professional learning and casual relief

through a teaching sequence focused on in-depth analysis of ‘literate’ texts.

modal texts and the types of texts that interest and motivate learners in the middle years
- rich talk of the kind that encourages students to ‘show their thinking’ through talk
- ‘deliberate’ teaching that begins with insightful assessment; involves planning for explicit instruction based on students’ needs; supports and scaffolds students through modelled, guided and independent teaching; provides clear and purposeful feedback and constant opportunities for student reflection.

Phase 1 of the program focuses on teaching for Comprehension, Phase 2 Vocabulary knowledge and fluent text reading practices,

The schools involved in this sample also employed other reading interventions concurrently with Reading to Learn so it is difficult to make clear judgements about the overall efficacy of the intervention. However it is reported to have had the following improvements:
- 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.
while Phase 3 focuses on consolidating and embedding new teaching and learning practices into school and classroom structures.

In particular, the program has helped schools in the following ways:

- greater clarity about the 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;
- most teachers in the schools are now using the teaching strategies in their everyday teaching across the KLAs.

| Which programs appear to be best | The evaluation demonstrates that the preferred approach | The advantage of this program is that it has been developed | The program is most suitable in any circumstance where | The evaluation clearly demonstrated that this |
suited to a range of
different
circumstances?

to MULTILIT is highly
structured, explicit and
systematic.

Despite “variations on the
theme”, many students not
only demonstrated reading
gains but also increases in
confidence, reading
enjoyment, and attitudes to
reading and schoolwork.

Can be employed in both one-
on-one as well small-group
settings

to operate in a whole class
context and does not require
withdrawal.

there is a whole school
commitment towards:
• Ensuring that the reading
ability of students in the
school must be enhanced
• All members of staff being
prepared to engage in
extensive professional
development and
collaborative planning to
enhance pedagogy relating
to teaching reading,
including the preparation
of tailored resources to
assist students with their
reading

program would work most
effectively when two key
ingredients are present:
• A whole school program that
ensures all staff members
are familiar with the
program and its style of
implementation
• Strong leadership and
planning to ensure the
approach is adopted with
fidelity and by the whole
school staff

The program can be adapted
to a range of different
learning contexts however the
overall purpose remains the
same: reading and writing
challenging at students’ own
year level

The strong emphasis on
“scaffolding learning”
provides a sound platform,
according to the evaluation
data, for teachers to transfer
this skill to the teaching and
What factors (could) have hindered significant improvement in student outcomes, and to what extent have they been/could they be addressed?

| What factors (could) have hindered significant improvement in student outcomes, and to what extent have they been/could they be addressed? | The evaluation worked best when an explicit approach was adopted. Despite this, the evaluation revealed considerable variability in length of sessions (often too short), number of sessions (often too few), and the content and strategies employed (eg in 10% of schools MULTILIT Reinforced Reading was rarely or never used).
These issues could have been addressed through closer executive supervision as all Tutors were thoroughly trained and understood requirements. | Very few factors cited in light of enhanced reading skills by almost all students as reported by participating teachers.
Improvements generally endorsed by both students and parents. | A lack of teachers’ commitment towards professional learning could have a detrimental impact on students’ reading due to the absence of appropriate pedagogy for teaching reading skills. This can be readily addressed where professional commitment to learning targeted reading strategies for students is a priority. | Difficult to make judgements due to the reported mismatch of perceived student outcomes between external test measures and internal assessments by various members of the local school community. While NAPLAN results highlighted minimal student improvement, internal assessments from Principals, teachers etc were much more positive.
Despite these limitations student engagement with reading and writing were widely accepted benefits of the program. Data clearly demonstrated that the overall impact of the program was directly related to the school leadership commitment and learning of other KLAs. Many teachers identified this transition. |
### Outcomes for Aboriginal students

Results for Aboriginal and non-Aboriginal students were similar. The results were seen to have been a consequence of the one on one model and highly structured approach.

Both NPLN and NAPLAN data reveal higher gain scores for Aboriginal than non-Aboriginal students, in terms of both general literacy skills and reading and comprehension skills.

Improved attendance rates also noted for many Aboriginal students.

Relevant texts also were reported to enhance learning by Aboriginal students.

Only a relatively small percentage of the students were Aboriginal, but teachers of these students indicated that tests indicated no major difference in outcomes between Aboriginal and non-Aboriginal students.

Evidence based on teachers’ sample reports ranged from identifying improvement in reading and comprehension skills for most or all Aboriginal students (half of the sample) to reports that there had been improvement in reading skills by some Aboriginal students. Clear impact of the program is not definitive for Aboriginal students.

### To what extent has each program resulted in significant ongoing improvements in teacher confidence and capacity to teach core literacy and core numeracy skills?

Variable impact on staff due to the interruptions to class routines. Despite this, some teachers report enhanced knowledge, awareness, confidence and skills in teaching reading, particularly in relation to use of student data and targeted approaches to reading.

Principals report the following teacher impacts:

- Increased commitment and enthusiasm to the teaching of reading
- Increased leadership capacity throughout the school

The program is reported to have enhanced teachers’ pedagogy in the following ways:

- a deepened understanding of comprehension strategies and the links to comprehension, vocabulary knowledge and text reading

Given that the program required large amounts of teacher time in the establishment and development of new teaching sequences, commitment and confidence levels were high because of the perceived impact on students’ reading skills.
<table>
<thead>
<tr>
<th>Increased staff collaboration and collegial trust</th>
<th>a deepened understanding of effective teaching of reading</th>
<th>More specifically, teachers reported the following professional benefits of their participation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>increased belief in teachers’ ability to improve literacy outcomes of all students</td>
<td>increased belief in teachers’ ability to improve the literacy outcomes of low achieving/disadvantaged students</td>
<td>being more reflective about their own practice, across all their teaching</td>
</tr>
<tr>
<td>deepened understanding of the nature and needs of literacy learners in Years 3-6</td>
<td>increased willingness to participate in shared reflection and discussion of teaching of reading with other staff</td>
<td>being more discriminating in selecting topics and resources to address student interest and needs</td>
</tr>
<tr>
<td>increased ability to translate literacy theory into practice.</td>
<td></td>
<td>increased ability to develop well-structured lessons, using more explicit teaching strategies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>feeling better prepared to assist students.</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
<td>Differences in impact</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Have schools developed or changed their practice in identifying, monitoring and tracking students who are selected for these literacy and numeracy programs? | Use of student data for monitoring student performance is now more common in some schools and is cited as a key learning for some teachers. In some other schools, teachers’ learning has been inhibited by the disruptions to routines and heavy expectations of following a prescriptive approach. Principals report that teachers have developed an increased understanding of SMART data and the use of quality assessments to make judgements about students’ tracking and progress, resulting in more accurate assessments and diagnoses of students’ reading needs. Identifying, monitoring and tracking students re reading is not seen to be one of the key planks of the program although it is part of the overall training and teachers do receive some assistance in this area. | Three major factors appears to have contributed to the differences in impact:  
  - the variation in quality of initial teacher professional learning experiences  
  - ongoing support that either contributed to negative perceptions, or alleviated their effect  
  - the length of time over which training took place, influencing how soon a sense of shared implementation could be
What is the relative cost effectiveness of the programs and what are the ongoing cost implications of sustaining these programs in schools? *(It should be noted in relation to this issue, that for those students most at risk, the cost effectiveness of intensive interventions needs to be considered in light of long-term impact on productivity)*

| **What is the relative cost effectiveness of the programs and what are the ongoing cost implications of sustaining these programs in schools?** | Consistently reported that this program requires an ongoing budget for intensive staff training and updating of Tutors, casual relief and the ongoing purchase of physical resources. These practical realities have reduced the level of acceptance of the intervention in some schools. | Schools generally chose to train all members of staff in a six day training program (3 sessions of 2 days); significant costs for training and provision of causal relief unless undertaken on weekends or school holidays, which is unlikely in most schools. Costs for training minimised in some cases by the use of DEC Regional trainers. After-hours time employed by many schools to engage in resource development and programming. Despite this, considerable costs were deployed on resources, ITC and consumables to implement the program. These are recurring costs. | This program requires an extensive budget due to the fact the training program requires 16 days over 2 semesters. It also involves considerable disruption to class routines due to the ongoing absence of classroom teachers. In addition a budget is required for the employment of casual relief during the extensive training periods. | The data indicates that staff training (including part-time and temporary staff) for this program is not only necessary but also should be undertaken concurrently because of the range of relevant conversations that it promotes. The costs for relief should therefore be carefully considered, in light of the advantages. 
In addition, teachers stressed the importance of “a whole school buy” if the program were to have the desired traction of addressing student reading skills were to be achieved. |

<p>| Are there any conclusions to be | Highly recommended that the program be implemented on a | Program is designed as a whole class approach, while | Not applicable to this program | While the program is not founded on a withdrawal |</p>
<table>
<thead>
<tr>
<th>drawn about:</th>
<th>one to one withdrawal basis</th>
<th>assisting Aboriginal specifically within the classroom to enhance reading capability.</th>
<th>strategy but a whole school approach, some 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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. the relative effectiveness of withdrawal programs?</td>
<td>While later follow up can occur on a whole school basis, interventions occur exclusively in a one to one context</td>
<td>While some schools used a one on one approach within the classroom, most commonly a whole class approach was employed among the 28 schools in the evaluation.</td>
<td>Not applicable to this program</td>
</tr>
<tr>
<td>• One-to-one interventions vs whole class programs?</td>
<td>The program is designed to take a whole class perspective and therefore works most successfully in this learning context. Training for teachers relating to this program also emphasised a whole classroom/whole school approach, even though the program may be adapted for one to one interventions within the classroom setting.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 15: Program Evaluations: Numeracy

<table>
<thead>
<tr>
<th>Quicksmart</th>
<th>TOWN</th>
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</table>
| **Which factors or contexts have enabled the most significant improvements for student outcomes for each program?** | As a ‘second chance’ program for students, this initiative is designed to particularly assist those students performing in the bottom 30% of the state in numeracy. Over a 30 week period the program focuses on quick recall of number facts and performance of basic computation skills. It commences at an appropriate level for the students’ current level of ability to ensure that they don’t lose face, and then works intensively in a withdrawal one-to-one format to enhance numeracy skills. Peer modelling is seen to be a key aspect for learning growth amongst students who would be suited to learning style characterised by systematic lockstep approaches. The program teaches the key values of persistence, risk taking and the social skills of empathy among students and therefore has transfer ability as a new pedagogy across a range of key learning areas. | The major focus of this initiative is to enhance the skills of teachers in relation to identification of students’ numeracy needs and the development of specific teaching programs to address those needs. Some evidence of enhanced student progress in numeracy also but particularly in those settings where schools are prepared to adopt a whole school approach, actively engage in professional development and develop lesson plans and related resources. In order to enhance student outcomes from the initiatives, the following suggestions were made:  
- Further pre-planning, preparation and testing of the program prior to launching in schools  
- Providing an easy on-line system to allow schools to share resources they have developed (and any tips about how to use... |
| Which programs appear to be best suited to a range of different circumstances? | The program can be used with any group of students from kindergarten to adult because it commences at the students’ current level and then engages them intensively during the instruction period. The program works most effectively when it includes all six of the key components of the integrated package. | The program is specifically suited for students whose performance is below average, particularly in key concept of place value. The program can be employed both in a whole class setting and on an individual case management basis. 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... |
| What factors have hindered significant improvement in student outcomes, and to what extent have they been/could they be addressed? | A key determinant for the success of the program is the principal's ongoing leadership support and commitment. Without this hands on and active leadership the program is potentially threatened. During its implementation it also requires close oversight by a member of the school executive to ensure that quality pedagogy is delivered to ensure enhanced student learning outcomes. Without the focus on deliberate practice, the impact of the program would be limited.

Each of these factors that are potential inhibitors is addressed during the intensive training program for those delivering the initiative. | 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 (in terms of improved understanding and ability to teach numeracy) 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).

There was a 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 may have contributed to less than desirable outcomes for some students. Because it relates to the overall nature and structure of the program, it could be difficult to remedy this situation.

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 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 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.

<table>
<thead>
<tr>
<th>Impact on Aboriginal student learning outcomes</th>
<th>Outcomes exactly the same for Aboriginal and non-Aboriginal students, with both groups showing improvement although NL NP data demonstrated greater improvement than NAPLAN.</th>
<th>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.</th>
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<tbody>
<tr>
<td>To what extent has each program resulted in significant ongoing improvements in teacher confidence and capacity to teach core literacy</td>
<td>Program has had a positive impact on both teachers and teachers’ aides who have been trained and involved in the implementation of the Whole school component of TOWN had a positive impact on teachers’ pedagogy for teaching numeracy. Greatest impacts related</td>
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</table>
| and core numeracy skills? | program. The program taught teachers a new approach to pedagogy that focused on initial diagnosis of student needs, preparation and use of student learning plans and the ongoing use of student data to track progress. Each of these factors has also been able to be transferred to other key learning areas enhancing the capacity of teachers not only in numeracy at other subjects as well. | to:  
- 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, including:  
- increased use of and capacity to differentiate students and identify students in need of targeted intervention  
- greater collaboration and ability to reflect on 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 | Have schools developed or changed their practice in identifying, monitoring and tracking students who are selected for these literacy and numeracy programs? | 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.

Such positive changes however do not necessarily lead to changed practices in identifying, monitoring and tracking students who are selected for these literacy and numeracy programs. |
| What is the relative cost effectiveness of the programs and what are the ongoing cost implications of sustaining these programs in schools? | A number of elements have been identified as contributing to the success of the program which are not necessarily cost-based. These include:
- 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 assessments and to a lesser extent, SMART data
- quality training, promoting teacher and tutor confidence in implementing the program | Each program is resource intensive. For the purposes of this initiative, 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.

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... |
- establishing a program coordinator to provide dedicated program support to tutors, students, class teachers and parents

While some of the above are expensive to implement, training also appeared to be relatively expensive: for example, trainees attend three two day sessions, and a one-day workshop is also expected for principals. As existing staff leave, there would be an expectation that new staff would have to be trained. While it appears this approach has been adopted to minimise costs, the amount of $2000 per student has been proposed by the developers of the program.

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

Each of these has a cost implication.

<table>
<thead>
<tr>
<th>Are there any conclusions to be drawn about the relative effectiveness of:</th>
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<tr>
<td><strong>b. Withdrawal programs?</strong></td>
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<tr>
<td>As this program is a second chance program aiming to change neural pathways, it will be most effectively delivered in a withdrawal one-to-one situation. It has been explained that it is very difficult to reach the appropriate depth in a whole</td>
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<tr>
<td>See below</td>
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school classroom to change neural pathways.

c. One-to-one interventions vs whole class programs?

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<tr>
<th>Mindful Learning</th>
<th>Mindful Teaching</th>
<th>Individual Learning Plans</th>
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| Which factors or contexts have enabled the most significant improvements for student outcomes for each program? | Because MLMT was not a program per se, schools identified that a major advantage was the flexibility to adapt the teaching and learning to a variety of factors, including student need and learning context, to facilitate students’ reading comprehension. This has resulted in:  
  - Greater enthusiasm for and confidence in reading  
  - Enhanced understanding of reading comprehension strategies and how to use these to enhance skills | 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. Improvements were noted in:  
  - enjoyment in reading  
  - reading fluency  
  - improved social skills and behaviour  
  - transfer of skills learnt to other Key Learning Areas (KLA)  
  - enhanced attitudes to homework. |
<table>
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<tr>
<th>Which programs appear to be best suited to a</th>
<th>The strength of this program is that it closely aligns</th>
<th>Each of the seven schools implemented a</th>
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<tr>
<td>Greater willingness to discuss what has been read</td>
<td>Variability of outcomes influenced by:</td>
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<tr>
<td></td>
<td>• model for providing targeted activities for identified students</td>
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<tr>
<td></td>
<td>• selection, qualification and management of tutors or personnel working with individual students</td>
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<td></td>
<td>• provision of training to tutors and others involved in the implementation of ILPs.</td>
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<td></td>
<td>These have occurred for the following reasons:</td>
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<td></td>
<td>• teachers being more active participants in the learning process</td>
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<td></td>
<td>• better use of data and accountability</td>
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<td></td>
<td>• greater professional dialogue among staff</td>
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<td></td>
<td>• greater consistency with teaching strategies for the individual students across the school</td>
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<tr>
<td></td>
<td>• greater involvement by parents and the community in educational outcomes and school planning</td>
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### range of different circumstances?

Student learning need with teacher strategy, irrespective of school circumstance. More specifically, it is underpinned by:

- Use of student data as the foundation for teacher planning
- Explicit teaching of students’ reading comprehension strategies
- The acquisition only of texts that actively engage students

A literacy program as their whole-class intervention, and as a consequence the *Individual Learning Plans* were literacy-based. See Table in exec summary.

### What factors (could) have hindered significant improvement in student outcomes, and to what extent have they been/could they be addressed?

Key inhibiting factors would appear to be:

- Poor leadership
- Lack of funding for the purchase of appropriate texts and training of teachers in the approaches required to deliver the MLMT model
- Fragmented rather than whole school focus to drive the change
- Resistance by teachers to try new ideas
- Lack of teacher collegiality and cooperation resulting in isolation of staff
- Inability to use data to meet the needs of all students in the class.

The following factors were identified as potential inhibitors:

- Poor quality tutors and uninformed support staff
- Poor school leadership
- Lack of a whole school commitment to the change and its process
- Inadequate funding
- Lack of on task time for students
| Outcomes for Aboriginal students | Only around 6 students in all MLMT schools identified as Aboriginal. Given this is such a small sample, it is not possible to draw any conclusions from this evaluation on the impact of MLMT on the educational outcomes of Aboriginal students. During school visits, staff generally said that MLMT was as effective for Aboriginal students as it was for non-Aboriginal students because MLMT looked at the individual needs of students and responded to those needs. | Improvements identified in general literacy outcomes and in reading and comprehension skills. NAPLAN data indicates that gain scores for Aboriginal students involved in ILPs were slightly higher than those for non-Aboriginal students. NPLN assessment data indicates that the gain scores for Aboriginal students were similar to those for non-Aboriginal students. |
| To what extent has each program resulted in significant ongoing improvements in teacher confidence and capacity to teach core literacy and core numeracy skills? | MLMT is reported to have specifically enhanced teachers’ knowledge, skills and attitudes about teaching reading comprehension. Teachers also report that, due to this development, they are more targeted in their classroom pedagogy with students whom they identify as having difficulties with reading comprehension. | Evidence of changed practice:  
- goals and activities chosen for ILPs are related specifically to students’ background and learning needs  
- assessments used with ILPs provided evidence of where support is needed  
- tracking and monitoring individual students allowed teachers to intervene when needed  
- evidence for intervention and improvement in skills now based on quality data rather than on incidental observation only. |
<table>
<thead>
<tr>
<th>Have schools developed or changed their practice in identifying, monitoring and tracking students who are selected for these literacy and numeracy programs?</th>
<th>The following teacher actions are reported to be occurring more frequently:</th>
</tr>
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<tbody>
<tr>
<td>• Explicit teaching of reading comprehension strategies</td>
<td></td>
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<tr>
<td>• Encouraging students to demonstrate deep understanding of texts</td>
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<tr>
<td>• Strategic selection of texts</td>
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<tr>
<td>• Participating in a cycle of teacher observation, including feedback and reflection</td>
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<thead>
<tr>
<th>Key changes in teacher practice included that they:</th>
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<tr>
<td>• have become more reflective on their teaching practice</td>
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<tr>
<td>• feel more confident in the use of data to identify student learning needs and inform planning</td>
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<tr>
<td>• focus more on specific literacy skill sets based on identified student need.</td>
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<tr>
<td>What is the relative cost effectiveness of the programs and what are the ongoing cost implications of sustaining these programs in schools?</td>
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<tr>
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<tr>
<td>Are there any conclusions to be drawn about the relative effectiveness of</td>
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<td>d. Withdrawal programs?</td>
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<td>e. One-to-one interventions vs whole class programs?</td>
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